

**Strategic Maneuver:
Defined for the Future Army**

A MONOGRAPH
BY
Major Frank Zachar
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

Second Term AY 99-00

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

DTIC QUALITY INSPECTED 4

20000919 051

Approved for public release: distribution is limited.
School of Advanced Military Studies
Monograph

Name of Student: Major Frank Zachar
Title of Monograph: Strategic Maneuver: Defined for the Future Army

Approved by:

LTC (P) Keith Vore, BS

Monograph Director

COL Robin P. Swan, MMAS

Director, School of Advanced
Military Studies

Philip J. Brookes, Ph.D.

Director, Graduate Degree Program

Accepted this _____ day of May 2000

ABSTRACT

Strategic Maneuver: Defined for the Future Army by MAJ Frank Zachar, USA, IN 65 pages.

This paper addresses the current misunderstanding surrounding the term known as strategic maneuver. Strategic maneuver is considered many different things to include: preclusion operations, moving units from theater to theater, and the use of strategic weapons. Some also consider strategic maneuver to be any form of military activity that has strategic ramifications. The misunderstanding is exacerbated by the fact that maneuver is a doctrinal term; however, *strategic maneuver*, as a concept or physical action, is not defined in doctrine.

Strategies of Edward Luttwak's relational maneuver, Aleksandr Svechin's style of attrition, or Hans Delbruck's exhaustion, contain common themes demonstrating certain characteristics necessary to achieve the aims of maneuver warfare. The dominating theme is the achievement of the aim of maneuver warfare, the disruption of the enemy's system. Unlike attrition, maneuver warfare focuses on seeking out and attacking vital enemy weaknesses. Historical accounts used to demonstrate the evolution of maneuver include: Schlieffen's plan, Stormtrooper tactics, the Blitzkrieg, Russian OMGs, and use of nuclear weapons. Ingredients of maneuver born from these examples include: technology, speed of decision making, use of combined arms, and dichotomy of forces.

The modern version of maneuver warfare has evolved from the basis of a strategy to a philosophy governing warfare. It places emphasis on the integration of all elements of command and control to shorten the decision making cycle. Informational capabilities of the military enable commanders to receive a greater understanding of the battlespace or region in which forces are operating. A reduced OODA Loop and increased informational abilities enables commanders to cycle through options faster than their adversary. The result are confusion and disorder within the enemy's system creating a psychological advantage over the enemy. Modern maneuver warfare with modern technology allows a new emphasis on the strategic capabilities of maneuver warfare beyond the application of military forces at the operational level of war.

Maneuver at the strategic level does not differ from the concept of maneuver. It is different in only terms of means. The philosophy, techniques, and purpose of maneuver remain the same at all levels war. Strategic maneuver involves the use of instruments of national power to achieve an advantage over an enemy's instruments of power. The purpose of maneuver at the strategic level is to collapse the will of the opposing nation and create an economical victory. A nation conducting strategic maneuver requires a formalized organization vested in the philosophy, techniques, and aims of maneuver. The Army best supports strategic maneuver by being able to fight and win campaigns. It should be able to respond quickly with both extra-ordinary and ordinary forces, collect

information for national leaders, conduct initial entry operations, and sustain itself. To integrate itself into the strategic maneuver process, the U.S. Army should focus on conducting operations in a timely manner and in conjunction with the other instruments of power.

Table of Contents

| | |
|---|-----|
| Abstract | iii |
| <u>I. Introduction</u> | 1 |
| Problem Significance and Background | 2 |
| Methodology | 4 |
| <u>II. The Evolution of Maneuver Warfare</u> | 5 |
| The Integration of Doctrinal Definitions | 6 |
| The Evolution of Maneuver Warfare Theory | 10 |
| Summary | 24 |
| <u>III. Contemporary Maneuver Theory</u> | 26 |
| Maneuver Warfare Overview | 31 |
| Summary | 33 |
| <u>IV. Strategic Maneuver</u> | 34 |
| Maneuver Warfare at the Strategic Level | 34 |
| Summary | 49 |
| <u>V. Conclusion</u> | 50 |

| | |
|-------------------|----|
| Endnotes | 52 |
| Bibliography..... | 59 |

Despite all the attention, maneuver warfare remains a subject of much confusion.

Lind-Maneuver Warfare Handbook¹

I. Introduction

The U.S. Army's field manual on operations describes maneuver as "the employment of forces through offensive or defensive operations to achieve relative positional advantage over an enemy force to achieve tactical, operational, or strategic objectives."² This same manual states that in war, the military objective at the operational level is the destruction of the enemy's military "at the least cost to American soldiers." During hostilities, tactical and operational execution is designed to support a strategic endstate that ensures a lasting victory. At the conclusion of hostilities, the same operational manual emphasizes the need for military commanders to continue to "support strategic objectives."³ "The military component of the National Security Strategy focuses on the use of military force-in demonstration or operation-as an element of national power."⁴ Those leading the U.S. Army have a Title 10, US Code, responsibility to ensure that they provide a force to meet the strategic objectives as outlined by the National Command Authority (NCA). A nation attempting to provide a force that can take advantage of the benefits of maneuver affecting all levels of war should pursue a force that addresses the strategic solution first. That force would be one that supports the conduct of strategic maneuver. Whatever that force may look like in the future, one thing is certain, it must

be well founded in war theory that supports maneuver at both the operational and strategic level.

Problem Significance and Background

The U.S. Army is going through a number of significant changes in an attempt to reinvent itself. These changes are a result of the last decade's intense international changes, the ever increasing appreciation of technology and its effects on the conduct of war, as well as the latest tug of war regarding war theory. As a result of these significant changes Major General Robert H. Scales, a proponent of the Army After Next concept, and others in the U.S. Army believe that it is necessary for the Army "to reset its strategic moorings and derive a clear understanding of its strategic relevance to America's future national policy before it could reasonably be expected to devise a new operational method for fighting on land." He continues by advocating a top down approach "to devise a new operational method of fighting on land."⁵ Unfortunately, these changes and the reengineering of land forces are creating confusion permeating the language and doctrine of the U.S. Army. This is especially creating confusion as to the military's conduct of operations in support of strategic initiatives.

The international changes accompanying the post Cold War era have left the United States "as a power with unrivaled dominance, prosperity, and security," whereby, "it must now lead the peaceful evolution of this system [democracy] through an era of significant changes."⁶ The shifting of the balance of power among nations, non-state actors, and global economic forces is changing the face of grand strategy for the United States.⁷ The U.S. Army, in its drive to maintain its relevance in the face of the changing grand

strategy, is seeking new methods of inclusion by means of the latest and up-coming technology.

With the advent of new technology such as the microchip, the proliferation of satellites, precision strike weapons, and Internet, the United States is faced with new means of providing strategic presence around the globe. New technology is providing firepower solutions to regional hotspots. Unfortunately, the focus on a weapons based response puts forth an unbalanced approach to future warfare. Remediating this imbalance, the U.S. Army is seeking ways to provide strategic response beyond simply advocating a long-range fires approach or forward presence approach. Maneuverists within the U.S. Army are the most outspoken in terms of creating more viable military sponsored solutions at the operational and strategic levels.

Maneuverists look towards remediating the age-old problem of balancing, at the tactical and operational levels, military firepower and use of actual ground forces. Their call to arms is "that distant punishment unexploited by the physical domination of the ground is a wasting asset."⁸ They advocate a ground force approach to create the most economical and decisive results. Providing ground forces to a region, to be used in conjunction with long range precision fires, requires more than simply enhanced mobility and greater lethality. It requires a coordinated war theory that addresses maneuver warfare and the need to instill this type of warfare into military doctrine. The problem associated with the maneuver at the strategic level requires more than just operational doctrine. It requires a doctrine that addresses military operations in support of maneuver at the strategic level, and the realization that "military force is only one component of the National Security Strategy."⁹

This paper addresses the current misunderstanding surrounding the term known as strategic maneuver. Those discussing strategic maneuver consider it many different things to include: conducting preclusion operations abroad, to moving units from theater to theater, to applying strategic weapons in times of crisis. Some also consider strategic maneuver to be any form of military activity that has strategic ramifications. The misunderstanding is exacerbated by the fact that maneuver is a doctrinal term; however, *strategic maneuver*, as a concept or physical action, is not adequately defined in doctrine.

Most understand that military doctrine supports the U.S. Army with its coordinated and combined approach towards operations in both a definitive and adaptive manner. Doctrine “reflects the strategic context in which Army forces will operate.”¹⁰ Few doubt the notion that technical changes made in the U.S. Army “demand doctrinal changes.”¹¹ However, radical doctrinal changes, made in light of new means and yet outside the consideration of war theory and science, are sure to be suspect. If the Army were to create a force under the guise of a strategic maneuver force, it would be best to identify exactly what strategic maneuver entails, and not overstep the boundaries of reality or oversell military capabilities. The intent of this paper is to identify the boundaries that encompass strategic maneuver and answer the following research question: what is strategic maneuver and does the term, strategic maneuver, provide any utility to warfighting for the U.S. Army?

Methodology

This paper takes a three pronged approach to reduce the confusion that surrounds the term maneuver, and apply the U.S. Military’s role regarding maneuver at the strategic

level of war. This paper first explains the evolution of maneuver warfare as it relates to the evolution of war theory. Second, this paper provides a modern definition of maneuver, placing an emphasis on objectives and their integration throughout the tactical and operational levels of operations. Third, this paper discusses the implications of maneuver at the strategic level with an emphasis on future military capabilities and its integration into the elements of national power. The conclusion defines strategic maneuver and makes recommendation as to how the U.S. Army should proceed concerning its role in the conduct of strategic maneuver.

II. The Evolution of Maneuver Warfare

Maneuver warfare is an exceedingly complex facet of war theory and has been developing since the first human conflict. To begin to understand what maneuver entails, one must first be grounded with definitions of maneuver and its relational components as they exist today in U.S. Army doctrine. Once defined, some understanding of maneuver's evolution in warfare can be accomplished. Lastly, but not least important, is the need to understand some basic intricacies of maneuver as espoused by modern day theorists and historians. There are numerous historical examples in history that demonstrate maneuver characteristics. The scope of this paper allows only a few notable historical accounts to demonstrate the basic characteristics of maneuver transcending all the levels of war. The examples allow the reader sufficient insight into the realm of maneuver warfare in order to make solid judgements about the meaning of maneuver at the strategic level of war.

The Integration of Doctrinal Definitions

A number of definitions are necessary to ground the reader before continuing. When reading or discussing maneuver, terms arise quite frequently such as maneuver, mobility, fires, attrition, tactical level, operational level, strategic level, strategic mobility, and strategy. The scope of this paper, though delving into the strategic level of war, requires the use of operational terms to act as the springboard into military operations within a strategic context. The Joint/NATO (North Atlantic Treaty Organization) definitions from Joint Publication 1-02, though of an operational nature, must suffice for supporting strategic level definitions.

Maneuver (JP 1-02, NATO) – 1. A movement to place ships or aircraft in a position of advantage over the enemy. 2. A tactical exercise carried out at sea, in the air, on ground, or on a map in imitation of war. 3. The operation of a ship, aircraft, or vehicle, to cause it to perform desired movements. 4. Employment of forces on the battlefield through movement in combination with fire, or fire potential to achieve a position of advantage in respect to the enemy in order to accomplish the mission. (Army) – Employment of forces on the battlefield through movement of combat forces in relation to the enemy supported by fire or fire potential from all sources, to gain potential advantage from which to destroy or threaten destruction of the enemy to accomplish the mission.

Mobility (JP 1-02, NATO) – A quality or capability of military force which permits them to move from place to place while retaining the ability to fulfill their primary mission. (Army) – Those activities that enable a force to move personnel and equipment on the battlefield without delays due to terrain or obstacles.

Fires – The delivery of all types of ordinance through both direct and indirect means, as well as nonlethal means, that contribute to the destruction, disruption, or suppression of the enemy; facilitate tactical movement; and achieve a decisive impact.

Attrition (JP 1-02, NATO) – The reduction of the effectiveness of a force caused by loss of personnel and material.

Tactical Level of War (JP 1-02) – The level of war at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical units or task forces. Activities at this level focus on the ordered arrangement and maneuver of combat elements in relation to each other and to the enemy to achieve combat objectives.

Operational Level of War (JP 1-02) – the level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations. Activities at this level link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives, sequencing events to achieve the operational objectives, initiating actions, and applying resources to bring about and sustain these events. The activities imply a broader dimension of time or space than do tactics; they ensure the logistic and administrative support of tactical forces, and provide the means by which tactical successes are exploited to achieve strategic objectives.

Strategic Level of War (JP 1-02) – The level of war at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) strategic security objectives and guidance, and develops and uses national resources to accomplish these objectives. Activities at this level establish national and multinational military objectives; sequence initiatives; define limits and assess risks for the use of military and other instruments of national power; develop global plans or theater war plans to achieve these objectives; and provide military forces and other capabilities in accordance with strategic plans.

Strategic Mobility (JP 1-02) – the capability to deploy and sustain military forces worldwide in support of national strategy.

Strategy (JP 1-02) – The art and science of developing and using political, economic, psychological, and military forces as necessary during peace and war, to afford the maximum support to policies, in order to increase the probabilities and favorable consequences of victory and to lessen the chances of defeat.

Campaign Plan (JP 1-02) – A plan for a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space.

Placing the above definitions in one succinct stream of thought is helpful towards understanding how they interact. First, a nation develops a national security strategy to

achieve objectives that support the national will of the country. If the objectives are inconsistent with the objectives of another country, the strategy is modified and the objectives redrawn to account for the opposing side. This new strategy formulates objectives in a manner that places the nation in a position of advantage relative to its enemy's elements of national power, thus forcing the issue. When a military response is required, the decision to use force is made at the strategic level. Once objectives are defined or at least initially attempted at the strategic level and it appears military action is necessary, military leaders then determine an operational strategy, emphasizing operational art, to achieve the strategic objectives. This is accomplished by identifying operational objectives. With operational objectives in mind, military leaders, in light of strategic guidance, consider a campaign plan linking operational objectives in time and space. Unfortunately, it is at this point that the idea of maneuver is first considered by the U.S. military. Maneuver at this point lies solely in the realm of the operational level of war, where the military leaders "link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives."¹² Using a parallel, it must mean that the conception of strategic maneuver should exist at the place where the National Command Authority devises a strategy in light of the national objectives. As the military attempts to consider maneuver at the operational level, it is faced with the need to provide the most economical response to the crisis. To do so, it must consider all the strategic implications of its decisions to include the other components of the National Security Strategy. It is at this juncture where maneuver warfare begins to take on a schizophrenic identity.

As military strategists link tactical actions to operational and strategic objectives, plans are created that use both maneuver and strategic mobility. During operations, forces are moved great distances to positions of advantage over the enemy at the operational and tactical levels of war, implying the use of both maneuver and strategic mobility. Naval forces and/or airpower, in accordance with the earlier definition of maneuver, are moved into a position of relative advantage to provide fires onto the enemy. This advocates both strategic mobility and maneuver. Ground forces must, in the same vein, be moved to a position within the theater to either threaten or provide fires on the enemy, implying the use of strategic mobility and possibly maneuver. Upon completion of the ground forces' deployment to the theater or battlefield, the forces then conduct maneuver warfare, by use of movement and/or fires. If the ground forces are not in a position to use fire and movement, but have altered the strategic plans of the enemy, or achieved the strategic objectives, have they conducted a form of strategic maneuver?

What is apparently missing from this sequence of activities and definitions (in terms of maneuver) is a firm delineation of operational and strategic maneuver. Neither term is defined in official military doctrine, yet there appears to be a place for each. The two major gaps in the above sequence appear at the strategic and operational levels of war. The gaps deal with the realm of maneuver warfare—movement to position of advantage over operational or strategic elements of power to destroy or threaten the enemy and attain operational or strategic objectives.

The reasons for these discrepancies are twofold. First, there exists an absence of connectivity between military force as an instrument of national power and its effect on both the United States' and the enemy's instruments of national power. Second, there

exists an absence of a strong understanding of what maneuver entails in its purest form. Maneuver is defined by the Joint manuals as moving forces to a position of advantage, but the Army has added that the movement is supported by battlefield fires. Robert Leonhard, the author of The Art of Maneuver, states that “the term maneuver as applied at the operational and strategic levels of war obviously cannot include the idea of battlefield fires.” He goes on to state, “it is quite simply defined as “movement toward an objective.” The purpose of the movement in our case is not tied to fires, but rather to gain an advantage over the enemy in some way—positionally or psychologically.”¹³ It is not clear as to whether ground forces, without being directly involved in tactical operations, can be moved to a position of relative advantage either on or near the battlefield and yet still be within the framework of conducting maneuver either at the operational or strategic levels. To ascertain whether both gaps considered above and the undefined terms of operational and strategic maneuver are in fact viable concepts, it is necessary to understand the basis of maneuver warfare and its surrounding theory.

The Evolution of Maneuver Warfare Theory

Maneuver warfare and its theory dates back to the first conflict. The scope of this paper does not allow a complete and detailed historical approach to maneuver theory's evolution. This paper only highlights, using the last century's evolution of maneuver warfare, the basics of maneuver theory. This is accomplished by identifying the essential components of warfare itself, the tools of maneuver warfare, and the underlying consistencies regarding maneuver warfare.

Describing the purpose of warfare is essential towards understanding the basis of maneuver theory. The purpose of war, as stated by the military theorist Carl Von Clausewitz, is to “force or compel the enemy to do our will,”¹⁴ by use of force. The ingredients within the above purpose requiring consideration are: the will of the enemy, forces at hand, objectives of friendly will, and the means to accomplish the necessary stated objectives. These ingredients amount to force pitted against force, where force equals the means times will. (Force = Means x Will)¹⁵ Will, as a component of the equation, is the ultimate objective of each side, but protected by the means available. To alter the enemy’s will, national powers focus their forces, to include military forces, against the forces of the enemy.

Each military force retains a similar subset of components of will and means. Therefore, the focus of military operations is to defeat the opposing military force’s means and/or will to fight. Means are physical in nature, slaves to the physics of nature, and will is a compilation of beliefs, psychology, and spirit. Together, means and will create a system of strengths and weaknesses.

When attacking an enemy’s system, a strategy is necessary “in order to increase the probabilities and favorable consequences of victory and to lessen the chances of defeat.”¹⁶ The strategy determines whether to attack strengths or weaknesses. Liddell Hart said of strategy, “Its purpose is to diminish the possibility of resistance, and it seeks to fulfill this purpose by exploiting the elements of movement and surprise.”¹⁷ It is in the strategy that the concept of maneuver is primarily considered in order to “defeat the morale of the enemy,” for “it is the linchpin between the physics and psychology of war.”¹⁸ It is the connection between will and means of a force.

Military theorists such as Hans Delbruck, Aleksandr A. Svechin, and Edward Luttwak provide the basic methods of warfare and the backdrop of strategy for the application of maneuver warfare. The strategy of Delbruck has great applicability to the accounts of WWI. Svechin's strategy, though decided upon about the same time, is best demonstrated by accounts from WWII. Luttwak, a modern writer of the Cold War Era, made great strides in explaining the relevance of maneuver warfare as it related to the Cold War. Each method of warfare or strategy, described by these three authors, created a different role for maneuver. It is necessary to identify the individual theorists, their theories of warfare, and then the impact of historical accounts upon their theories. This method demonstrates how this century's evolution of maneuver warfare played a critical role in the development of modern day maneuver theory.

Delbruck defined the strategy of annihilation (*niederwerfungsstrategie*), and the strategy of exhaustion (*ermattungsstrategie*), in 1926. Delbruck was a military historian. Both of his theorized methods of warfare, annihilation and exhaustion, used maneuver but in varying ways. Annihilation used the decisive battle as the medium to cause the total destruction of the enemy armed forces. It became the basis of Alfred von Schlieffen's plan for Germany during WWI. Schlieffen, acting as the Prussian Chief of Staff, planned a great wheeling operation that passed through Belgium into Northern France.

Though predicated by Helmuth von Moltke's (the previous Prussian Chief of Staff), new found appreciation of technological advances in weaponry, the telegraph, the use of railroads, and leaders with greater decision making abilities (all of which are tools of modern day maneuver), the strategy of annihilation was chosen. Moltke defeated the

Austrians at Koniggratz in July 1866, during the Austro-Prussian War. Moltke effectively applied technological advances with organizational changes to apply new methods of warfare in the achievement of national objectives.¹⁹ “He planned a campaign that linked strategic objectives and mobilization with operational maneuver and tactical battles to achieve victory.”²⁰ Yet, in light of the new method of warfare identified by Moltke, the German high command placed a greater appreciation on the “immense increase in war potential of the nation.”²¹ With that emphasis, the Germans began WWI using the strategy of annihilation pitting their strengths symmetrically against the French. They placed the strategy of annihilation above that of the overall realistic political and economical considerations inherent in the strategy of exhaustion.²²

When Germany’s great wheeling maneuver through Belgium into France broke down, trench warfare ensued and the single pole strategy of annihilation was put aside. “Delbruck sensed a strategical revolution of the first importance.”²³ *Ermattungsstrategie*, or the strategy of exhaustion, became the next strategy of choice. The strategy of exhaustion entailed two poles, implying a decision of when to fight and when to maneuver. According to Delbruck, the commander must choose when to “obey the law of daring and when to obey the law of economy of forces.”²⁴ Delbruck insisted that the military commander consider the following before seeking battle: “the aim of the war, the potential political repercussions, the type of enemy he is facing and the response of his nation to victory or defeat.”²⁵ The Germans had already sought battle and their efforts had failed, but there still existed the possibility of a breakthrough as a function of a new tactical method known as the ‘Stormtrooper’ tactic.

The advent of the Stormtrooper employed many positive facets of maneuver. Though the employment of the Stormtrooper was not entirely successful, the characteristics of the techniques of the Stormtrooper provided many insights into the development of maneuver thought. The Stormtroopers were organized into battalion size units made up of the best tactical fighters in the German Army. Their purpose was to penetrate enemy defenses on a narrow front and disrupt logistical and artillery units in the rear, all the while avoiding enemy machine gun nests that were positioned at various depths along the front. Breakthroughs were accomplished, vulnerable rear units were disrupted, and local panic along the front was created. Unfortunately, the tactical maneuver lacked ingredients essential to successful maneuver and could not achieve operational success.

The Germans failed to augment the successes of the Stormtroopers and capitalize on the psychological damage done to enemy front line troops, who were receiving reports of enemy units to their rear. Most noticeably absent was a significant German pursuit force. As a result of insufficient communications equipment of the era, a combined arms approach was not utilized. The artillery support and follow on forces failed to provide significant follow on support to Stormtroopers deep in enemy territory. The Stormtroopers culminated when they outran their logistics. Without resupply, the maneuver was relegated to only a short-lived tactical success. Though a failure, the Stormtrooper concept was reinvented for Germany's next war and proved to be decisive with the appropriate changes made.

German General Heinz Guderian, a signal officer, created a different entity that paralleled the Stormtrooper but provided a qualitative success above that of typical tactical operations. Guderian combined the fast moving armored vehicle with the radio to

create a technological advantage that paralleled the tactical fighting advantage of the late Stormtroopers. The lightening fast advance of German forces across France in May of 1939 was labeled Blitzkrieg.

The Blitzkrieg concept was a significant evolutionary step in maneuver warfare. In one single decisive operation, the fall of France (a strategic objective), was accomplished. The concept loosely entailed conducting penetration and breakthrough by highly mobile mechanized formations followed by large numbers of infantry. The strategy surrounding the concept of Blitzkrieg was still one of decisive battle, but because its methods were different it produced a different and better result. Mathew Cooper describes the difference between the two methods as follows:

Physical destruction in one was supplanted by paralysis in the other as the primary aim; well-coordinated flanking and encirclement movements were replaced by unsupported thrusts deep into the enemy's rear areas as the method; guarded flanks and unbroken, if strained, supply lines gave it velocity as unpredictability as the basic rules of operation; centralization of control was superseded by independence of action as the first condition of command; and the mass infantry armies, whether or not supported by tanks and aircraft, made way for the relatively small powerhouses of the armored divisions as the primary instrument of victory.²⁶

The Germans maintained fewer armored fighting vehicles than the French did but the trade-off of maneuver over attrition paid great dividends for the Germans. By attacking through neutral Belgium and avoiding the Maginot Line, the German armored columns achieved surprise. Capitalizing on surprise, the Germans avoided concentrations of French resistance and drove deep into France. The effects of the lightening deep penetrations created a state of paralysis on the French military command forcing the capitulation of France itself.

The ingredients of successful maneuver for the Germans operating in France were many. The Germans had made great advances in the use of combined arms with motorized artillery and use of close air support by aircraft. The German Staff's combined use of the technology of the day, to include motorized forces, the radio, and successful reconnaissance, increased timeliness of critical operational decisions. The enhanced decision cycle the Germans worked with allowed them to take advantage of the French's perpetual unreadiness.²⁷ When Germany attempted the same strategy using the same type of maneuver while attacking into the depths of the Russian frontier, an entirely new set of maneuver issues was discovered.

The German's lack of adherence to the significant reasons for the Stormtrooper's failure of past became their undoing when Hitler turned towards the Soviet Union. The Germans attacked Russia in 1942, making deep penetrations into the Soviet Union, but quickly discovered that the governing issues of successful maneuver theory were not the same for all theaters. German forces quickly penetrated the Soviet forces, which were intended to conduct the decisive battle, leaving them ruptured and disjointed. However, German combat forces, like their predecessors—the Stormtroopers—quickly out paced their logistical tail and were forced to halt without achieving their operational objectives. The Soviets took advantage of the broken German tempo, poor logistics, spread out condition, and poor weather. A battle of attrition took its toll on the Germans while the Soviet forces created armies in the Soviet rear at dizzying speed. The Soviets created forces and approached their logistical needs in a manner that would take maneuver warfare to yet another stage in its development.

Prior to the German surprise attack into the Soviet Union, Soviet theorists had been actively pursuing strategies that would lead to the next evolution of maneuver. The two main strategies being forwarded by the Soviet theorist, Svechin, were the strategies of attrition (izmor), and destruction (sokrushenie). Attrition was strategy that took advantage of the vastness of the Soviet frontier, where Soviet troops could trade space for time to organize, equip and conduct counter-attacks. The opposite strategy, which was initially sponsored by Stalin, was the strategy of destruction. The destruction strategy based its premise on a decisive battle conducted by forces defending at the border. In the end, the Russians used both strategies, but the strategy encompassing the potent aspects of maneuver warfare evolved into the more decisive and pursued strategy.

The Soviet counter-offensive and offensive operations relied heavily on large penetrating tank armies followed by even larger concentrations of mechanized units. In 1942, the Russians "put into practice their 'tentative' ideas regarding a breakthrough to allow deep penetration by armored forces."²⁸ The Soviets organized what is today referred to as Operational Maneuver Groups (OMGs), but added one more critical ingredient, follow on armies. The OMG, using motorcycle units to disrupt command and control in depth, used: armored columns to make initial penetrations and breakthroughs, cavalry to conduct "deep-raiding maneuver operations," and concentrations of mechanized corps to "not only exploit breakthroughs but to develop breakthrough into pursuit."²⁹ Though German Field Marshall Manstein later claimed that the Russians had in fact learned the penetrating maneuver from the Germans, he failed to notice "the rich body of Soviet pre-war military literature which had advocated just this."³⁰ He also failed to recognize all the advances the Russians had made regarding maneuver warfare.

The Russians had progressed one level up the maneuver hierarchy by creating powerful and mobile higher formations such as the Unified Tank Army. For the Russians, "tank armies became the pre-eminent operational maneuver forces." The tank armies had "the aim of unbalancing the enemy, crumbling him from within, paralyzing his operational and, perhaps, strategic command centers and lines of communication rather than attacking forces per se."³¹ Although not unlike the German concept of the Blitzkrieg, the numerical advantage in material and personnel that the Russians gained during the war exaggerated the aim of Russian maneuver warfare, resulting in decisive victory over the Nazis. The same numerical advantage brought about yet another major evolutionary ingredient to maneuver theory--the necessity of logistical preparation.

When it became apparent that the Nazis were close to defeat, the Russians focused on logistically preparing to meet the Japanese menace to their west. The Russians had dealt with many of the same logistical shortfalls that brought the German advance into Russian to a standstill. It was clear to the Russians that logistics determined the operational depth of maneuver. The deep thrusts made by Russian mobile forces presented an enormous logistical challenge in terms of fuel and providing fresh forces to the front. One method the Russians used to overcome the challenge was use of captured munitions and supplies. The Russian employment of specialized fuel treatment units and the creation of huge transport fleets were other methods.³² A more permanent solution was deemed necessary by the Soviet General Staff as they considered the movement from their western theater to the Far East.

An in depth plan to create an unprecedented logistical capability for Soviet forces attacking into Manchuria in 1945 enabled one of the highest forms of successful

maneuver seen to date. Stalin's strategy was to make a significant land grab in the Far East prior to the conclusion of hostilities with Japan and the allies. Russia planned to cut off Japanese forces in Manchuria from Japanese forces in China by using a massive and lightening fast ground offensive. The Russian plan to move forces from one theater to another was accomplished by first addressing the plan's inherent logistical needs enabling strategic mobility and deep-reaching operational supply. "The key to this successful ground offensive was the build-up of supplies and equipment in the Far East via Soviet Pacific ports prior to the outbreak of hostilities."³³ The Russians used a combination of diplomacy with allies, primarily the United States, to lend-lease rail and shipping capabilities.³⁴ The Trans-Siberian railroad was finished and improved to move supplies from Moscow east providing a significant alternative to the sea lines of communication should they be cut off. The expanding and unprecedented supply capabilities that the logistics plan offered allowed Russian ground units to move quickly over great distances in mixed configurations. This provided significant qualitative benefits to the operations. "The Atomic Bomb and the Soviet invasion of Manchuria were both strategic surprises for the Japanese military and created the political and military conditions for a termination of hostilities."³⁵

Together, the two forces influencing Japan created decisive and economical results beyond what a slow but relentless war of attrition could have. The final maneuver, conducted by the allies and the Soviets, to knock Japan out of the war presented new characteristics for maneuver theory. The allies demonstrated that maneuver is best conducted with an unorthodox force, such as the atomic bomb, coupled or followed up by an overwhelming orthodox force, such as the Russian ground forces.³⁶ The terms

orthodox and unorthodox are terms used by Sun Tzu in Art of War, to describe the activities prevalent in warfare.³⁷ To avoid confusion, General Griffith's translation of the orthodox and unorthodox to ordinary and extraordinary is used from hereon.³⁸ The following provides the necessary insight into the translation:

General Griffith—a highly experienced military officer with expert knowledge of strategy and tactics—states that *cheng* (orthodox) forces engage, or engage and fix the enemy, while *ch'i* (unorthodox) forces defeat him, often through flanking and rear attacks.³⁹

Against the Japanese, the Allies demonstrated the combined use of both forces at the operational level. The Russians used an ordinary force made up of highly maneuverable OMGs and follow on armies exploiting success. The United States used the atomic bomb, which played the role of the extra-ordinary force. Up to this moment in history, it appeared that maneuver warfare was the more ingenious and decisive strategy, but the latest technology was changing this outlook.

The advent of the atomic bomb and its proliferation caused the resurfacing of an old argument between theorists advocating attritional warfare and theorists advocating maneuver. Edward Luttwak, a strategic advisor to the U.S. Government in the late 1980s, documented his strategic theories at a time when the Cold War and nuclear proliferation were the significant strategic problem for the United States. Luttwak placed warfare into a spectrum bounded by two styles of war: attrition and relational maneuver.⁴⁰ Luttwak argued that there is no warfare that is purely one or the other.⁴¹ Each style encompasses the elements of maneuver but with different specific aims. Depending on which end of the spectrum warfare is being conducted determines the focus of strategy, whether it be at

the tactical or operational end. This paper addresses the higher end of the spectrum of levels of war, mainly the operational and strategic levels.

According to Luttwak, attritional war is “waged by industrial methods.”⁴² The enemy is a compilation of targets to be destroyed, and the aim of maneuver, in attritional war, is movement to place fires on the concentration of the enemy. It is an attack on means by means. Attacking enemy strength requires a greater overall attritional capacity. Luttwak wrote, “attrition is a quasi-physical process that guarantees results proportionate to the quality and volume of the effort expended, and conversely cannot yield success without material superiority.”⁴³ Relational maneuver, however, can yield “results disproportionately greater than the resources applied to the effort.”⁴⁴

Relational maneuver’s goal, according to Luttwak, is not related to the destruction of the “physical substance” of the enemy, but to the objective. The objective is the “systemic disruption” of the enemy.⁴⁵ This is accomplished by applying “selective superiority against presumed enemy weaknesses, physical, psychological, technical, or organizational.”⁴⁶ Relational maneuver requires “accuracy in identifying enemy weaknesses, as well as speed and precision in the action taken to exploit them.”⁴⁷ Relational-maneuver as a style of war has attritional characteristics at the tactical level but the goal of relational-maneuver has more effect at the operational level. “The more relational maneuver, the more important is the operational level.”⁴⁸ The blitzkrieg operations of the German Army against France and Russia, the Russian counter offensive operations against the Germans, and the Russian attack into Manchuria against the Japanese are examples of Luttwak’s relational-maneuver conducted at the operational

level. Use of the atomic bomb at the close of WWII seemed to be a technological weapon that would tip the balance between attrition and maneuver.

The advent of the atomic bomb led many to consider the bomb as the sole ingredient of an extra-ordinary force. The argument was that it provided speed, mobility, and the necessary firepower all wrapped in one tool of war. It did not necessarily require an ordinary force to conduct an exploitation phase because it achieved its own operational and strategic results. As with all firepower solutions to the battlefield, such as artillery in WWI, each side, with similar technology, had the capability to build and create a case for attritional war. The atomic bomb became a short-lived sole aspect of maneuver warfare for the United States as other countries, namely the Warsaw Pact, created their own atomic bomb arsenals.

Just as the Russians had to counter, with their own improved form of maneuver warfare, the lightening fast penetrations made by the Germans during WWII, NATO had to reconsider the implications of maneuver warfare on an atomic battlefield during the Cold War. Early in the Cold War, the Soviets chose an offensive strategy using the same relational-maneuver they had made great strides implementing during WWII against the Germans and Japanese. They placed emphasis on OMGs, Forward Detachments, and Raid units under the auspices of superior numbers to make it virtually impossible for a successful NATO defense. NATO initially considered a defensive strategy of attrition in Europe.⁴⁹ NATO found it necessary to emphasize new, improved technology for conventional means to stop the waves of attacking Soviet forces, while maintaining the specter of tactical nuclear weapons as a last resort.⁵⁰ NATO, planning initially to trade space for time in Europe, placed emphasis on the Anti-tank Missile, the improved Main

Battle Tank and capabilities offered by the credible U.S. Air Force and Navy. This attrition-like strategy, similar to Svechin's 'izmor' strategy, resulted in a failure to consider the political implication of turning West Germany into a battleground or a nuclear wasteland should a war ensue. It also had a drawback in that geographically Eastern Germany was not like the expanses of Russia.

NATO was forced to choose a new strategy, one still defensive, but with maneuver as its style. The new strategy was called the AirLand Battle (ALB), which aimed at fighting throughout the depth of the battlefield.⁵¹ Deep attack weapon systems such as precision munitions coupled with attack helicopters, with the existing capabilities offered by the U.S. Air Force and Navy, could penetrate the first echelon attacking Soviet forces to attack the second echelon, thus taking out the necessary ordinary force of the Soviets.⁵² The new strategy required increased numbers and greater logistics to support the newly conceived, balanced extra-ordinary and ordinary force.

The pursuance of such a strategy placed an additional burden on the U.S. economy beyond that which was already supplying the on-going nuclear arms race with the Soviets. To provide a maneuver warfare option to the Allies, strategic changes were required to build larger and improved conventional forces to act as an extra-ordinary force. The logistics necessary to supply the extra-ordinary force and the increased ordinary force that could successfully defend in Germany forced the United States to develop a greater appreciation of logistics at the strategic level. The U.S. strategic mobility capability was increased, as well as the logistical system that could support operations in depth.⁵³ Not unlike Stalin in WWII, who decided in advance to ensure that forces attacking into Manchuria would have first the available means to achieve both operational and strategic

objectives, U.S. Presidents Jimmy Carter and Ronald Reagan placed sufficient emphasis on a military build-up that included logistics as the basis.⁵⁴ Reagan prioritized the elements of national power to fight a war that placed an emphasis on the maneuver warfare. *He did so by first strategically maneuvering the elements of national power to support a future fight with the Soviet Union.* Fortunately, the Cold War ended without a shot being fired. The Soviets had been dislocated in a manner that today is considered the modern aim of maneuver warfare.

Summary

The examples given above, whether they are called examples of Luttwak's relational maneuver, Svechin's style of attrition, or Delbruck's exhaustion, contain common themes demonstrating that certain characteristics need be accounted for in order to achieve the aims of maneuver warfare. The dominating theme is disruption of the enemy's system. Unlike attrition, maneuver warfare focuses on seeking out and attacking vital enemy weaknesses. To attack enemy weaknesses that are normally protected by larger forces, speedy penetration is necessary.

To achieve speed towards enemy weakness, it is necessary to overcome the inherent friction of the battlefield. Smaller forces reduce the level of friction, advocating the usage of economy of force at least at the point of penetration. Knowledge about the enemy in depth calls for intense intelligence operations and reconnaissance, subsequently calling for a strong staff to utilize the flow of information to make timely decisions. It is the speed of decisions that increases tempo and flexibility to the smaller penetrating force. As Sun Tzu wrote, "Thus a small enemy that acts inflexibly will become the

captives of the larger enemy.”⁵⁵ The coupling of the penetrating extra-ordinary force with a significant ordinary force, to provide additional follow on forces, and logistics, supports the exploitation of the penetration.⁵⁶ The correct employment of each force should achieve surprise on the enemy. Lastly, maneuver calls for the use of all available types of forces in a combined arms approach augmented by the latest technology.

The utilization of the latest technological innovation compounds the effectiveness of all the ingredients of maneuver discussed above. The latest technology is important for enhancing the economy of force characteristics of both the ordinary and extra-ordinary forces. As demonstrated during the German Blitzkrieg across France, the employment of mechanized forces was integral for achieving deep penetrations. The combining of mechanized forces with radios increased the German operational tempo beyond what the French could endure. The technological advancement associated with the atomic bomb provided a demonstration of the power of technology to provide effects normally associated with extra-ordinary forces. The introduction of Russian fuel treatment units to augment the penetrating forces and the enhanced transport capabilities to move follow on ordinary forces and logistics as demonstrated by the Trans-Siberian Railroad supported the exploitation of disrupted Japanese forces in Manchuria. Though success is possible with a limited plan for logistical support and only the application of extra-ordinary forces, providing the conditions are right, it is far better to be first logistically and materially capable in terms of follow on combat forces. This enables breakthrough and pursuit to achieve enemy operational or strategic paralysis and the fulfillment of strategic objectives. The recent explosion of information based capabilities within the U.S. has taken maneuver an additional step forward in its evolution.

III. Contemporary Maneuver Theory

Maneuver warfare is above all a philosophy concerning the means to defeat the enemy.

Robert Leonhard.⁵⁷

Modern maneuver theory continues to use many of the maneuver attributes discussed earlier in this monograph, but with the advent of new military technology and informational capabilities, modern maneuver warfare theory has evolved. This chapter covers three distinct areas of evolution. First, maneuver theory has traded its spatial focus to one that places emphasis on time. Two, the aim of maneuver theory has evolved from moving to a place of physical advantage, generally accounting for the existing firepower of the enemy, to a place of psychological advantage, thereby more directly and preemptively attacking the will of the enemy. Three, the latest technology has allowed modern military theorists to transform maneuver into dominant maneuver. The result of dominant maneuver is degradation of the enemy's capabilities at the strategic level of war. The combination of the latest evolutions of maneuver warfare theory is pertinent as to why the concept of strategic maneuver is now so glibly used in speculating on the U.S. military's potential.

Traditional maneuver theory predominantly included spatial considerations, but as armies and their immense logistical tails increased, time began to play a more significant role. Early methods of maneuver warfare included the use of forces maneuvering in space to gain a position of advantage.⁵⁸ From Napoleon to Germany's blitzkrieg,

maneuver warfare included forces that flanked or penetrated to “gain a position of advantage over the enemy.”⁵⁹ The combination of firepower and mobility achieved the position of advantage, all the while attempting to limit actual fighting. Once the earnest fighting to gain a flank or penetration had achieved its purpose, maneuver warfare sought “to take advantage of the outcome by pursuing the enemy, keeping him off balance, and striking into his vitals.”⁶⁰ In the late 1970’s, late Air Force Lieutenant Colonel John Boyd made a profound impact on maneuver theory. He found that victory occurred when “one side had presented the other with a sudden, unexpected change or a series of such changes to which it could not adjust in a timely manner.” Boyd’s concept is commonly known as the “Boyd Cycle,” the “OODA Loop,” or Decision Cycle, and concludes that, “conflict can be seen as time-competitive observation-orientation-decision-action cycles.”⁶¹ Boyd’s cycle led others to attempt to capture the intricacies of the cycle and place them into applications at the various levels of war.

The object of maneuver warfare, according to William S. Lind, the author of Maneuver Warfare Handbook, was to move faster than the enemy through the Decision Cycle. His approach generally concerned the tactical level, but his concepts regarding maneuver had an influence on maneuver warfare at all levels of war. He listed three points forces must consider to speed through the OODA Loop. First, units must exist with decentralized command.⁶² Decentralized command is achieved with mission type orders.⁶³ Second, friendly forces must be able to conduct operations under the intense battlefield confusion they themselves have created.⁶⁴ Forces utilizing the concept of Schwerpunkt can overcome the effects of confusion by focusing “all power [including combined arms] to one purpose.”⁶⁵ Lastly, formulas must be avoided.⁶⁶ The concept of surface and gaps

removes the focus of commanders on set formulas to one that simply leads to correct application of the Schwerpunkt concept.⁶⁷ Lind wrote:

The Schwerpunkt can also be understood as the harmonizing element or medium through which the contracts of intent and the mission are realized. It pulls together the efforts of all subordinates and guides them toward the goal, toward the result the commander wants.⁶⁸

Tools focused at the Schwerpunkt, such as firepower, reserve, counterattack forces, sufficient command and control, and operational art take advantage of the increased tempo resulting from the streamlined OODA Loop. Larger operations may contain many OODA Loops. Maneuver means “being consistently faster through however many OODA Loops it takes until the enemy loses its cohesion—until he can no longer fight as an effective, organized force.”⁶⁹ The technique of conducting operations in light of the Boyd Cycle implies that maneuver is more than a means to positioning forces.

U.S. Army Lieutenant Colonel Robert Leonhard emphasized the need to progress maneuver theory away from maneuver as a means, to maneuver as an endstate. He writes:

In the same way, the classic principle of maneuver describes the goal we are after—the disadvantaged enemy—but describes physical maneuver as the way to achieve it. This is incomplete and inaccurate. In order to advance our understanding of modern warfare, it is incumbent upon us to embrace maneuver as the endstate of our plan, but not as the means.⁷⁰

The common definition of maneuver is “the movement of forces in relation to the enemy to gain positional advantage.”⁷¹ By this definition, the means is the movement of forces and the ends is the positional advantage over the enemy. The emphasis within the definition lies on the means versus the ends. Achieving the position of advantage (the ends) is the foundation of maneuver. There exist various positions of advantage, such as

in spatial relation, in time (as emphasized by Boyd), and with knowledge. But, as war is a clash of wills, it is the psychological advantage that should be emphasized as the position of advantage that provides the greatest gains.

The psychological advantage places forces in a position to defeat the enemy versus simply destroying him. "Maneuver warfare is above all a philosophy concerning the means of defeat of the enemy."⁷² An enemy that has lost the will to fight has been placed in a defeated condition. At the heart of the condition of defeat is the psychological condition of lost will to continue the fight. Colonel Ardent du Picq, a mid-nineteenth century French Army officer, said "weapons are effective only insofar as they influence the morale of the enemy."⁷³ Leonhard writes "defeat is 90 percent morale in nature."⁷⁴ Gaining a position of psychological advantage allows forces to strike at the will of the enemy. Striking at the enemy's will in turn negatively affects the enemy's center of gravity, "those characteristics capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight."⁷⁵

Maneuver theory applies a different meaning and treatment to centers of gravity. The enemy center of gravity is defined as a critical vulnerability according to modern maneuver theory. B.H. Liddel Hart, a British military officer and theorist, understood a key facet of maneuver theory when he devised his "Indirect Approach," which is based on defeating the enemy as economically as possible. To achieve defeat, he believed that critical vulnerabilities needed to be created and attacked. Leonhard discerned three critical vulnerabilities: geographical, functional, and psychological.⁷⁶

Each vulnerability serves the purpose of maneuver, but the psychological advantage gained by means of a preemptive strike strikes closer to the aim of pure maneuver

warfare—collapsed will. The aim of psychological operations is an attack on the intentions of the enemy. Success is achieved when the enemy believes that he should not or can not oppose the friendly force. Sun Tzu wrote, “For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the supreme excellence.”⁷⁷ Obviously, to do so requires a preemptive strike. Leonhard explains preemption as it relates to maneuver:

Indeed, the highest and purest application of maneuver theory is to preempt the enemy, that is, to disarm or neutralize him before the fight. If such is not possible, the maneuver warrior seeks to dislocate the enemy forces, i.e., removing the enemy from the decisive point, or vice versa, thus rendering them useless and irrelevant to the fight. If the enemy cannot be preempted or dislocated, then the maneuver-warfare practitioner will attempt to disrupt the enemy, i.e., destroy or neutralize his center of gravity, preferably by attacking with friendly strengths through enemy weaknesses.⁷⁸

It is the preemptive strike on the enemy, aimed at creating a psychological advantage, which constitutes the ideal method of maneuver warfare. An activity is required to gain the psychological advantage through preemption, but not necessarily a ballistic activity. New technology is opening the doors to a further evolved form of maneuver that relies less on fire and maneuver and more on simply positioning.

The latest form of modern maneuver warfare is known as dominant maneuver. Dominant maneuver originated with the United States’ publication of Joint Vision 2010. Dominant Maneuver is defined as “the multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, land, sea, and space forces to accomplish the assigned operational tasks.”⁷⁹ By the same publication, dominant maneuver “will allow our forces to gain a decisive advantage by controlling the breadth, depth, and height of the battlespace.”⁸⁰ This is accomplished

through use of decisive speed, tempo, and asymmetric leverage from a position of advantage.⁸¹ The asymmetric leverage is information based and allows leaders a clearer picture of the conditions surrounding the crisis. Dominant maneuver is not to be confused with strategic mobility, but uses strategic mobility as an enabler. The difference between ordinary maneuver theory (discussed earlier), and dominant maneuver, is the objective.

Dominant maneuver seeks outright operational, as well as strategic, objectives. It does so by integrating “precision strike, space warfare, and information war operations-to attack decisive points, defeat the enemy center of gravity, and accomplish campaign or war objectives.”⁸² This form of maneuver entails unit positioning in or around the theater more so than the actual employment of forces in pitched battles. Major General Robert H. Scales, in his book Future Warfare, emphasized a force tailored for strategic projection that could conduct “intense acts of strategic preemption.”⁸³ To Scales, strategic maneuver involves lean, versatile, full spectrum, capabilities-based forces strategically deploying with great speed, to gain control over an enemy’s land, resources and its people.⁸⁴ It is this concept of dominant maneuver that has led some, to include Scales, to conclude that the future version of the Army referred to as the Army After Next, will rely on strategic maneuver to win wars on the ground.

Maneuver Warfare Overview

Maneuver warfare is a compilation of philosophy coupled with the actualization of current capabilities. The philosophy of maneuver entails dislocating an enemy from its position of advantage, in turn gaining an advantage for friendly forces. The result is the

most economical defeat of the enemy possible. The current capabilities actualizing the philosophy of maneuver include four areas of importance. The first area is where the latest technology is coupled with creation of a strategy in light of the desired objective. The second area is the employment of techniques translated into doctrine and enabling friendly forces to reduce or successfully negotiate the friction that abounds in war. The employment of techniques of maneuver warfare also support forces dealing with chaos on the battlefield. The third area is the method of maneuver as it relates to the circumstances of the conflict. In this area, forces are actually moved towards the objective. The fourth area is the aim or advantage sought by the method of maneuver. The result of successful maneuver warfare is an enemy suffering from paralysis, dislocated from its source of power, and faced with three alternatives: inactivity, capitulation, or destruction. The following diagram helps emphasize the four areas that entail maneuver warfare. The parts making up the four areas have been discussed throughout the earlier portion of this monograph.

| Preparation | Techniques | Methods | Aims | Results |
|--|---------------------|-------------|-------------------------|-------------|
| Technological Advances Strategy Formulation | Tempo | Preemption | Geographical Advantage | Inactivity |
| | Schwerpunkt | | | |
| | Auftragstaktik | Dislocation | Psychological Advantage | Surrender |
| | Combined Arms | | | |
| | Surprise | | | |
| | Logistics | | | |
| | Ordinary Force | Disruption | Material Advantage | Destruction |
| | Extraordinary Force | | | |
| Objectives Identified | Friction Reduced | Movement | Collapsed Will | Defeat |

Figure 1-Maneuver Warfare

Summary

The modern version of maneuver warfare has evolved from the basis of a strategy to a philosophy governing warfare. It has evolved away from the type of warfare that focused on the spatial characteristics of the battlefield as they affected the friendly forces. Commanders continue to struggle with maintaining forces by means of logistics, well-equipped and trained forces, communications, and superior plans. But, today commanders are now placing more emphasis on the integration of all these elements of command and control to provide them with a faster decision making cycle than their enemy. Informational capabilities of the military enables commanders to receive a greater understanding of the battlespace or region in which forces are operating. With a reduced OODA Loop and increased informational abilities, commanders can cycle through options faster than their adversary. The results are confusion and disorder within the enemy's system creating a psychological advantage over the enemy. The psychological advantage in turn collapses his will before a material defeat of his forces. The psychological advantage is enhanced by means of preemption and positioning. Dominant maneuver integrates the latest technology to preemptively attack directly at the strategic objectives. Preemption used against strategic objectives creates a more decisive blow to a nation's will. The evolved form of maneuver, used in conjunction with modern technology, allows a new emphasis on maneuver warfare beyond that of the application of military forces at the operational level of war.

III. Strategic Maneuver

To ascertain whether Major General Scale's idea of strategic maneuver or dominant maneuver is in fact maneuver at the strategic level, it is necessary to compare the compilation of modern maneuver warfare concepts with the aspects of war at the strategic level. Throughout the comparison, it is necessary to keep in mind the philosophy of maneuver and to identify the purpose of the modern aspects of maneuver as they relate to both the operational and strategic levels of war. In any international contest of wills, there exists strategic ingredients pertaining to either side, directly and indirectly affecting the nature of the conflict. It is against these strategic ingredients that maneuver warfare must focus upon, if the action is to be called strategic maneuver. The comparison should unveil the true meaning of strategic maneuver and its inherent characteristics to include aim, objective, and method. With the true meaning of strategic maneuver unveiled, the applicability of the military and U.S. Army to strategic maneuver can be discussed.

Maneuver Warfare at the Strategic Level

Applying the concept of maneuver warfare at the strategic level involves little departure from the concept of maneuver warfare as it exists in its pure form. In its purest form, maneuver warfare is a philosophy that guides operations at all levels of war. However, there exist significant maneuver warfare considerations relevant to each level of war alone. The first major transition in considerations occurs when moving from the tactical level to a higher level of war. Unlike the tactical level, "the term maneuver as applied at the operational and strategic levels of war obviously cannot include the idea of battlefield fires."⁸⁵ Maneuver at the operational and strategic levels of war deals with

moving towards an objective “to gain an advantage over the enemy in some way- positionally or psychologically.”⁸⁶ Within the operational level, the advantage deals primarily with gaining an advantage over enemy military forces. *At the strategic level, the objectives which maneuver attempts to gain an advantage over are the instruments of national power.* Paralysis at a national level is the anticipated result of strategic maneuver and is aimed squarely at unbalancing the enemy’s instruments of national power.

The instruments of national power that strategic maneuver is aimed at include the diplomatic, informational, military, and economic elements. Modern theorists have noted that there is a merging of consideration with political, economic, and cultural factors in modern warfighting to an unprecedented degree.”⁸⁷ Robert Leonhard writes:

The American generals of World War II may have been relatively free to romp across Europe in their drive to end Nazi Germany. They may have had the convenience of dividing activity into two categories: “military” activities and “nonmilitary” activities-and to concern themselves primarily with the former. But today, communications technology and the liberalization of political thought have combined to increase sensitivity to the political geography of any future theater of war. The modern general must think seriously about many more factors than fire and maneuver. Political, economic, and cultural elements exist not only as constraints, but as positive opportunities to gain the advantage in conflict. The grand strategy of the Roman Empire included political and economic penetration into conquered lands, as a hedge against possible rebellion and invasion. In Vietnam, the communists’ strategy of *dau tranh* was essentially a political strategy, in which strictly military affairs were secondary. And while these aspects of war have always been present in history, they are much more fundamental to modern warfighting today.⁸⁸

The Germans applied maneuver warfare “to a degree attained by few other armies (notably those of the Finns and the Israelis), but “rarely determined the strategy of the German Army.”⁸⁹ As a result of failing to apply maneuver to the strategic level, Bruce

Gudmunsson writes that “much tactical and operational virtuosity was wasted in battles and campaigns that did little to improve Germany’s strategic position.”⁹⁰ Though successful at times, the blunt form of maneuver possessed little strategic aim.

Strategic maneuver requires preparation to match current technology with a sound strategy aimed at achieving decisive results concerning the objectives of maneuver. The technology enabling modern communications and precision weapons has drastically changed the application of modern maneuver—giving maneuver a greater applicability at the strategic level. Modern communications capabilities provide national leaders with an unprecedented amount of information to guide decision making and subsequently operations. Precision weaponry coupled with satellite imagery provides the NCA the ability to strike targets deep in enemy territory. Internet traffic moves globally at the speed of light. Together the National Command Authority can effect and receive real-time reports about most military operations occurring around the globe. The incorporation of such technology into a strategy is the initial step towards strategic maneuver.

Together, the U.S. communications and intelligence apparatus provides strategic leadership the opportunity to take a more responsible role towards creating a sustainable strategy by means of choosing objectives. In the past, the strategy of warfighting mainly concerned the generals. Leonhard correctly claimed that, “in modern warfighting the selection of objectives at the strategic level is primarily a civilian function, not a military one.”⁹¹ The objectives are directly affected by the balancing of ends, ways, and means at the executive and legislative level. At the strategic level, this approach to end, ways, and means requires an economical method of balancing the elements of national power to

achieve the desired objectives. Not only do the objectives come under his purview, but he also has the ability to change them rapidly.

The techniques available to the national leaders to commit or rapidly redirect military forces towards objectives, under the auspices of strategic maneuver, require a sense of organization similar to what doctrine provides military leaders at the operational level. "In peacetime the strategist should pay sufficient attention to organizational matters, because in the future the organization that has been created will affect strategic decision in a certain way."⁹² The U.S. Congress mandated that all services within the military operate as a joint community. Along with the mandate, there exist the requisite training requirements to ensure success of the Joint operations at the operational level of war. To conduct strategic maneuver the civilian and military organization, supporting the NCA's decision making ability, must be streamlined in advance in a fashion similar to that which provides jointness at the operational level.

It is more likely that a maneuver-based strategy will be conceived if a trained and cohesive organization at the national level, that includes all the representatives of the instruments of national power, is created. The combined organization advocating a maneuver-based strategy is more apt to choose objectives that are attainable through strategic maneuver. The proper coupling of technology inherent with each instrument of power is more likely to occur in such an organization. The coupling of technology with maneuver considerate objectives into a workable strategy supports the techniques inherent to the execution of maneuver.

The techniques supporting maneuver warfare at the strategic level are very similar to those at the lower levels of war. Instead of the techniques involving military units and

their effects on enemy units, such as is evident at the tactical and operational level, the techniques at the strategic level are more broad sweeping. Within the context of strategic maneuver, the techniques support methods of balancing the instruments of national power and security to reduce friction at the national level. The techniques of increased tempo, Schwerpunkt, surprise, the use of ordinary and extra-ordinary forces, and logistics apply to maneuver at the strategic level. The technique of using a combined arms approach at the strategic level parallels in concept only in that it represents the combined and balanced approach to national crisis using all elements of national power in concert. Maintaining a tempo or rhythm that exceeds that of the adversary's still remains a most outstanding feature of maneuver at all levels of war.

The tempo of strategic activities is supported by rapid decision making capabilities. Lind identified, in his book Maneuver Warfare Handbook, that decentralized command was necessary for rapid decision making. This is true at the tactical level, somewhat true at the operational level, but not completely necessary at the strategic level. Boyd, in his papers, wrote that command, at the strategic level, must be centralized. This helps to "establish aims, match ambitions with means/talent, sketch flexible plans, allocate resources, and shape focus of the overall effort."⁹³ Strategic leaders must in turn understand the Schwerpunkt concept lest they fall away from one of the main techniques of maneuver warfare.

The Schwerpunkt concept applied to the strategic level encourages the NCA and President to "shape focus, shift, and harmonize operations and support at all levels."⁹⁴ Today, the President of the United States has nearly real time awareness of details at the tactical level and can make decisions based on tactical events lending strength to the

understanding that tactical events can have strategic impact.⁹⁵ This presents the capability of a President, “who, leaving more routine matters of coordination and logistics to his staff, positions himself where he can see and directly influence the battle at the Schwerpunkt.”⁹⁶ This influence at the Schwerpunkt is not oriented with regard to the physical maneuvering of military units at the tactical level and subsequently does not undermine the necessity to continue to operate a system of decentralized military command. Any attempt made by national leaders to maneuver units on the battlefield would be a mistake and relegate the strategic capabilities of the head of state to the realm of the operational. Martin Van Creveld, author of *Air Power and Maneuver Warfare* wrote:

Fixation on an enemy army creates an unreasoning orientation on control of surface areas. Forcing us to do like on like at the operational level. This leads to attrition, the alter ego of maneuver.⁹⁷

The influence that the President or NCA should demonstrate at the Schwerpunkt is a conceptual focus.⁹⁸ Creating a conceptual focus is not considered by the strategic leadership alone; the military must play a part as well.

In the context of strategic maneuver, senior military leaders are faced with the task of observing the tactical operations, directing the operational, and providing options to the strategic level. To provide options to the strategic leadership, military leaders must strive to address the conceptual focus versus simply the physical process of operations. In order for military leaders to support the conceptual focus of the national leader, they must focus on what Robert Leonhard describes as option acceleration. He describes it as:

the rapid creation of political/military options in a theater of operations. The chaotic, often unpredictable context of both regional and global interaction will put option acceleration at a premium in future conflict.

Twenty-first-century American strategists will plan the use of military forces, diplomatic leverage, economic influence, informational resources, and intelligence operations to achieve national goals. The nation-state that can conceive, develop, and resource viable courses of action faster than the adversary will be the victors both in war and in lesser military operations.⁹⁹

Option acceleration supports a decreased decision making cycle at the strategic level, and thereby sustains a tempo potentially greater than that of the enemy's.

The flexibility inherent with a number of options rendered by the military provides the national leaders capabilities similar to those associated with counterattack and reserve forces. The counterattack at the strategic level parallels Lind's counterattack force, which is necessary to maneuver at the tactical and operational levels. The counterattack at the strategic level is simply an option available to the NCA, used once the enemy has committed itself to its own course of action. The counterattack is not necessarily a physical one, but one where the balance of elements of national power is changed to support a friendly option. It achieves surprise when the enemy does not expect such speed in terms of a strategic reaction. It is in this context of action that the U.S. military with its firepower potential plays its most crucial role in support of strategic maneuver.

Firepower is a crucial component of maneuver warfare, and the military not only provides its own firepower at the tactical and operational levels of war, but also is an ingredient of the conceptual firepower at the strategic level. Lind wrote, while discussing maneuver at the tactical level, that the main purpose of firepower was to support movement.¹⁰⁰ Robert Leonhard later wrote, "maneuver [at the tactical level] includes both fire and movement, and the ultimate aim of movement is to facilitate firing."¹⁰¹ Fires at the tactical level suppress or destroy the enemy and reduce his chances of placing

fires on friendly forces. Alone, fires present the enemy with a solvable problem, but the addition of other fires inherent in a combined arms approach presents the enemy with a dilemma. It is only when the enemy is facing a dilemma that friendly forces are on the path of maneuver and can approach the objective of maneuver-a psychologically disadvantaged enemy. However, as Leonhard rightly said, firepower at the strategic level does not entail battlefield fires. Firepower inherent to strategic maneuver is produced with a combined usage of the elements of national power to create a dilemma for the enemy national leadership.

The coherent strategy emphasizing strategic maneuver involves a combined usage of elements of national power to support movement towards an objective. The 1998 National Security Strategy states, "We must be prepared and willing to use all appropriate instruments of national power to influence the actions of other states and non-state actors."¹⁰² Any element of national power used exclusively to move towards an objective or to produce victory leads to a war of attrition. A war of attrition at the strategic level is an option, remembering that Delbruck theorized that warfare at any level is never entirely made up of attrition or maneuver. The problem exists when an enemy appears to be engaged in a conflict of attrition yet is actually using maneuver. That enemy is actually engaging in a war where he is focusing on maintaining or even increasing the tempo by use of option velocity. The options presented give the leaders an opportunity to strike at friendly weakness.

The U.S. debacle in Somalia is an example where the U.S. was psychologically disadvantaged overnight when the media broadcast pictures of dead U.S. soldiers being dragged through the streets of Mogadishu. The NCA was not prepared for the Aideed's

strategic maneuver. The U.S. was engaged in a purely military type approach to nation building in Somalia and appeared unwilling to use all the elements of national power. Enemies of U.S. involvement in Somalia quickly moved from a military reaction to U.S. presence, albeit unorganized, to an information based reaction. By quickly cycling through the ingredients of national power available to Aideed, he was able to maneuver at the strategic level faster than the U.S. leadership. The firepower Somalis used to maneuver with at the strategic level consisted of an ad-hoc military element of national power made up of street fighters, and an informational element of national power, a camera. The President and the U.S. military were left nationally embarrassed when they discovered that the strategy for Somalia itself was flawed and subsequently led to a flawed approach to the issues surrounding Somalia. This U.S. defeat demonstrated the vulnerability of socia-economic systems to informational warfare and in turn demonstrates the necessity of an integrated approach, with regard to instruments of national power, to every threat.

In light of the United State's latest strategy of engagement, and in cases of conventional wars, preparation of maneuver techniques to include logistics and the balance of force dichotomy (ordinary and extra-ordinary forces) are extremely important. Logistics determine the strategic reach of elements of national power just as operational logistics determine operational reach of military forces. Logistics have a direct relationship to the successful implementation of both ordinary and extra-ordinary forces. Logistics determine the supply situation of each force as well as serve as targets for destruction or neutralization.¹⁰³ At the strategic level, logistics entail a national economy that can sustain the combined usage of instruments of national power. "Engagement

abroad rightly depends on the willingness of the American people and the Congress to bear the costs of defending U.S. interests-in dollars, energy and when there is no alternative, the risk of losing American lives.”¹⁰⁴ In view of sustaining the military element of national power in wartime, an “attentive development of a plan of mobilization, concentration, manpower, and logistics” is necessary.¹⁰⁵ If the military is to act as an ordinary or extra-ordinary force, it must be sustained in time and space to accomplish its objectives. The degree of logistical preparation to sustain such forces, depends primarily on the nation’s security strategy.

The national strategy in peacetime and crisis determines the force dichotomy of instruments of national power. The use of ordinary and extra-ordinary forces must be sufficiently addressed and focused at the *Schwerpunkt*. Sun Tzu envisioned the extra-ordinary force as a force that would work to pin the enemy while the ordinary force worked to maneuver around and flank the enemy. In the realm of strategic maneuver, the instruments of national power are broken down into two such forces. Instead of these forces focusing on the geographical flanks of the enemy, they focus on the vulnerabilities of the adversary’s national security.

The military can and must play a part in either force during both peacetime and conflict and hence must be prepared to support that strategic requirement. In today’s geopolitical environment, “strategic success will place a premium on military versatility.” The question as to how a military performs the task of an ordinary force at the strategic level is answered the same way it has been for centuries. It must be powerful, for quantity has a quality all its own. However, the nation’s answer to a militarily predominant strategic extra-ordinary force requires more insight. “American military forces must be capable of

rapid adaptation to the broad and constantly varying range of strategic tasks and conditions.”¹⁰⁶

Just as the Stormtroopers acted as a tactical extra-ordinary force in WWI, the modern U.S. military must be capable of acting as a major portion of the strategic extra-ordinary force. The reasons for failure of both the Stormtroopers discussed earlier in this paper, and the German Army moving towards Moscow in WWII, must be highlighted and corrected at the strategic level for successful implementation of strategic maneuver. The maneuver mistakes of the Stormtroopers included failing to use a combined arms approach, the absence of a sufficient ordinary force, and a logistical failure. The German Blitzkrieg into USSR failed because of logistical inefficiency as well as the absence of an ordinary force. With adequate preparation for the use of logistics and dichotomy of force, the U.S. still faces the problem of distance when it attempts to conduct strategic maneuver.

The U.S. is not positioned on any probable threat's border; therefore, it has the need to have a worthy strategic mobility potential. The mobility potential must address the deployment of the ordinary and extra-ordinary forces to include an adequate logistical tail. Solutions for the integration of the combined instruments of national power available within both forces must be identified. “The geostrategic position of the United States has committed the Army (and the military as a whole) in this century to rely on strategic maneuver to win wars on the ground.”¹⁰⁷ The United States is entering an era of which “the speed with which forces can be deployed in a single, unrelenting, sustained act of global maneuver.”¹⁰⁸

This speed calls for a more resolute means of applying the techniques of strategic maneuver towards agreed upon methods of maneuver at the strategic level. First, the U.S. needs to consider adding information and intelligence into the group of recognized instruments of national power and then must consider their integration into a response to national security crisis. The addition requires some form of strategic integrative doctrine similar to the Joint Doctrine that integrates the services providing a combined arms approach to all military responses to include actual warfighting. General Scales writes the following conclusion after conducting a strategic level wargame.

Speed emerged once again as a dominant factor at the strategic-political, strategic-military, and operational levels of war. Technology's impact on the speed of political decision making during crisis complicates the National Command Authorities' problems of deterrence and response and the always-difficult problems of forming coalitions of willing allies and reluctant friends. Paradoxically, the very capabilities that allow future forces to increase speed and tempo may contribute to hesitation on the part of political leaders.¹⁰⁹

Obviously, hesitation creates a decline in tempo, providing a window of opportunity for an enemy to counter with its own strategic maneuver. To avoid dilemma at the strategic level, national leadership must understand strategic maneuver and be prepared for its conduct with some formalized organization and doctrine. This doctrine would assist in actively applying the methods of maneuver warfare: preemption, dislocation, and disruption.

It is in the application of the methods of strategic maneuver where most strategic failures occur. The methods of maneuver are traded for destruction of the enemy's instruments of national power by either: attempting military decapitation, destroying the enemy's military, or destroying of the enemy's economy. In peace operations, methods of

maneuver are traded for operations with non-destructive characteristics such as peace enforcement or nation building. All of these trade-offs result in failures to conduct strategic maneuver and end with an uneconomical approach to strategic and operational level operations. Using destruction as a strategy is a valid strategy only in the best of circumstances.

Destruction as a method of warfare versus the methods of maneuver warfare, can have positive results but is enemy dependent. An overwhelming force such as the one maintained by the United States, has the destructive power to paralyze a small nation outright. At a glance, the strategy used by the United States against Panama in 1989 appears to one of destruction. The truth of the matter is that a method of strategic maneuver was executed. The U.S. "was able to execute a strategic preemption of unparalleled success."¹¹⁰ The defeat of the Panamanians by the United States is an example where military decapitation and defeat of the enemy army resulted in an U.S. victory. Maneuver theory attempts to defeat the enemy through means other than simple destruction of his mass.¹¹¹ The conflict in Panama was a small-scale intervention and the U.S. was able to overwhelm both the Panamanian leadership and Army in one decisive preemptive attack. For destruction to be considered, it must be in line with the political objectives of the attacking force. Rarely is the destruction of a nation within the realm of the suitable because of the international outcry that would ensue. The unfeasibility of destruction is more evident during limited conflicts.

In large-scale contingencies, where such an overwhelming advantage is not available, the method of destruction is infeasible for other than strictly political reasons. "Military decapitation, or "strategic paralysis," is infeasible for three reasons: strategic direction

does not demand high-volume, real-time communications; links cannot be cut for long; and authority can be predelegated to theater commanders.”¹¹² The fixation on defeat of an army is a military objective and not a political objective and therefore provides only operational success. “With Clausewitz in mind it must be in line with political objectives and only adopted if defeat of enemy army is required to achieve national goals.”¹¹³ In the case of the Gulf War, clear-cut objectives were blurred.¹¹⁴ This left a situation where the coalition focused on military objectives-the destruction of the Iraqi Army. “The necessary degree of destruction (of the enemy’s military) will depend on the importance of the political objective as seen by the enemy.”¹¹⁵ Failure occurs when the military focuses on military objectives to gain strategic endstates, and the enemy avoids contact all the while attempting to undermine the will of the enemy. The NVA were successful in avoiding total military destruction, and once they defeated the will of the U.S. government and people they marched to victory over the South Vietnamese Army.¹¹⁶ Destruction of the enemy military is not a valid strategic maneuver method because it does not incorporate a balanced approach to warfare using all instruments of national power to create a sense of strategic paralysis in the most economical fashion.

Strategic preemption, dislocation, and disruption are viable methods of strategic maneuver and the military can play a role in each method. Each method focuses the combined uses of instruments of national power to gain a position of advantage. Each method denotes a dilemma versus a problem, which is evident with the method of destruction. Strategic preemption can “forestall the enemy’s plans.” Sun Tzu wrote “the highest realization of warfare is to attack the enemy’s plans.”¹¹⁷ It involves all the instruments of national power and creates a situation where the enemy faces a condition

where if anticipates if he continues with his plan he will suffer greater losses than acceptable. Strategic dislocation is “the art of rendering the enemy’s strength irrelevant.” Instead of confronting an opponent’s strength, such as its military force, it attempts to render that strength irrelevant by confronting the countries weakness. As discussed previously, the NVA successfully dislocated the United States by avoiding its military and focusing on the will of the American people and government. Strategic disruption “is the practice of defeating the enemy by attacking his (strategic) center of gravity.”¹¹⁸ It focuses on the intangibles of a nation such as its will. Disruption aims at achieving a psychological advantage. The methods of maneuver can be used individually or simultaneously. But, to be effective they must aim at gaining an advantage over the enemy geographically, psychologically or materially.

An advantage gained in any of the these areas is intended to attack the will of the opposing nation and achieve a rapid, decisive, and if possible a bloodless victory. The advantage can be gained in a number of ways. Using preemption, military forces can conduct lightening attacks on the strategic nodes of the enemy to materially disadvantage him or move to a position of geographic advantage to reduce his opportunities to meet the operational and strategic objectives of his own. Using dislocation, a nation can politically remove his enemy’s international support leaving him psychologically and materially disadvantaged. The formation of coalitions or the deployment of credible military forces to certain areas result in a geographically disadvantaged enemy whose strategic reach is limited and/or his military isolated from the supporting economy. These are only a few examples within the realm of strategic maneuver. In each case, national leaders should

maintain the capability of utilizing their military as an ordinary force or extra-ordinary force in the application of the methods of maneuver.

The U.S. Army, as a component of the U.S. military as a whole, plays a significant role in strategic maneuver in terms of an enabler, but not as the sole force of its conduct. To say the U.S. Army conducts strategic maneuver is a mistake. The nation conducts strategic maneuver using the military as part of its force. This does not remove the necessity for military leaders to understand the role of the military in the nation's conduct of strategic maneuver. The military should continue to develop its leaders and organize itself to support the philosophy and conduct of maneuver. The Army should focus on organizing itself to be a part of a preemptive force with dominant maneuver capabilities. To avoid limiting the strategy of the nation, the Army must recognize the need for logistical preparation and technological development of its resources. The relevance of the U.S. Army is not in jeopardy as a result of new technology or the international dynamics that exist today. As long as the military is an instrument of national power, the U.S. Army will play a role as part of the force that conducts strategic maneuver.

Summary

Maneuver at the strategic level does not differ from the concept of maneuver. It is different in only terms of means. The philosophy, techniques, and purpose of maneuver remain the same at all levels war. Strategic maneuver involves using the instruments of national power to achieve an advantage over an enemy's instruments of power. The purpose of maneuver at the strategic level is to collapse the will of the nation and create the most economical victory possible. A nation conducting strategic maneuver requires a

formalized organization vested in the philosophy, techniques, and aims of maneuver.

“Warfare is and will remain a time-competitive event, and future warfighters will be judged by how rapidly they [military leaders] can put viable strategic options in the hands of the National Command Authority.”¹¹⁹ Strategic maneuver is the greatest form of maneuver and should be a significant feature of every nation’s security strategy.

V. Conclusion

Strategic maneuver is the compilation of strategy steeped in a philosophy of maneuver, augmented by technology, directed against instruments of national power with the aim of collapsing the enemy’s national will. Maneuver warfare has been a dominant theme in strategy over the course of the last century. The dominating theme is the achievement of the aim of maneuver warfare, the disruption of the enemy’s system. Strategic maneuver focuses on placing the enemy’s instruments of national power in a state of imbalance, by gaining an advantage over one or all of the instruments. The advantage is maintained by fostering a strategic and operational tempo that is greater than the enemy’s. Securing a heightened tempo requires preparation at the national and operational level.

A nation creates the capability of performing strategic maneuver by integrating the latest technology and formalizing its organization to conduct maneuver. The recent explosion of information based capabilities within the U.S. has added power to the informational instrument of national power and has created a condition where strategic maneuver is becoming a credible and efficient option. Only an integrated approach in application of strategic maneuver can guarantee that a country coordinates strategic

resolve towards the aim of strategic maneuver thus achieving a position of advantage.

Armies, supporting their nation's strategic maneuvers, must condition themselves beyond the operational realm, whereby leaders are trained to provide viable options to the national leadership in support of the attainment of strategic objectives.

U.S. Army leaders need not focus on conducting strategic maneuver independently, but should focus on creating an organization that can provide national leaders with maneuver based options. Preparation on core competencies to conduct operations at the operational level should be emphasized. The Army best supports strategic maneuver by being able to fight and win campaigns. It should be able to respond quickly with both extra-ordinary and ordinary forces, collect information for national leaders, conduct initial entry operations, and sustain itself. To integrate itself into the strategic maneuver process, the U.S. Army should focus on conducting operations in a timely manner and in conjunction with the other instruments of power.

Endnotes

- ¹ William S. Lind, Maneuver Warfare Handbook, (Westview Special Studies in Military Affairs, 1985), 1.
- ² Department of the Army, FM 100-5, Operations, (Washington, DC: United States Government Printing Office, 1993), 2-13.
- ³ Department of the Army, FM 100-5, Operations, (Washington, DC: United States Government Printing Office, 1993), 2-10.
- ⁴ *Ibid.*, 1-4.
- ⁵ Robert H. Scales Jr. MG, USA, Future Warfare, (U.S. Army War College, 1995), xii.
- ⁶ W. Bowman Cutter, Joan Spero, Laura D'Andrea Tyson, "New World, New Deal," Foreign Affairs, (March-April 2000), 35 80.
- ⁷ Paul Kennedy, Grand Strategy in War and Peace, (Yale University Press, 1991), 176.
- ⁸ Robert H. Scales Jr. MG, USA, Future Warfare, (US Army War College, 1995), 26.
- ⁹ Department of the Army, FM 100-5, Operations, (Washington, DC: United States Government Printing Office, 1993), 1-4.
- ¹⁰ Department of the Army, FM 100-5, Operations, (Washington, DC: United States Government Printing Office, 1993), 1-1.
- ¹¹ *Ibid.*, xiii
- ¹² Department of the Army, FM 101-5-1, Operational Terms and Graphics, (Washington, DC: United States Government Printing Office, 1997), 1-115.
- ¹³ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 18.
- ¹⁴ Carl Von Clausewitz, On War, translated and edited by Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1976), 119.
- ¹⁵ William D. Wunderle, MAJ USA, "Yin and Yang: The Relationship of Joint Vision 2010's Concepts of Dominant Maneuver and Precision Engagement," Fort Leavenworth, KS, 1998), 5.
- ¹⁶ Department of the Army, FM 101-5-1, Operational Terms and Graphics, (Washington, DC: United States Government Printing Office, 1997), 1-146.
- ¹⁷ B.H. Liddell Hart, Strategy, (England: Gaber and Fager, Ltd., London, 1967), 322.
- ¹⁸ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 135.

¹⁹ Russell Hall, "Defining Joint Vision 2010's Dominant Maneuver," (SAMS, Command and General Staff College, Fort Leavenworth, KS, 1997), 19.

²⁰ William D. Wunderle, MAJ USA, "Yin and Yang: The Relationship of Joint Vision 2010's Concepts of Dominant Maneuver and Precision Engagement," (SAMS, Command and General Staff College, Fort Leavenworth, KS, 1998), 18.

²¹ Gordon A. Craig, "Delbruck: The Military Historian," Makers of Modern Strategy, ed. Edward Mead Earle, (Princeton University Press, 1943), 344.

²² Ibid.

²³ Ibid., 345.

²⁴ Ibid., 342.

²⁵ William D. Wunderle, MAJ USA, "Yin and Yang: The Relationship of Joint Vision 2010's Concepts of Dominant Maneuver and Precision Engagement," (SAMS, Command and General Staff College, Fort Leavenworth, KS, 1998), 6-7.

²⁶ Mathew Cooper, The German Army 1933-1945, (Scarborough House Publishers, Chelsea, MI. 1978), 148. Moltke had a firm understanding of the changing conditions of war over time. "However, von Moltke was careful not to transform his ideas about warfare into a rigid doctrine. For him the art of war lay in a combination of calculation and daring, each new conflict bringing with it new circumstances that invalidated any attempt to impose on it strict, preordained strategic principles. In his words: 'Strategy is a system of ad hoc expedients; it is more than knowledge, it is the application of knowledge to practical life, the development of an original idea in accordance with continually changing circumstances. It is the art of action, under the pressure of the most difficult conditions.'" Edward Mead Earle, Makers of Modern Strategy, (London, 1948), 180.

²⁷ Robert R. Leonhard, LTC, USA, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 183. Robert Leonhard writes, "Military units are perpetually unready to fight. Unreadiness is the natural condition of all forces, both friendly and enemy. Combatants in war are almost invariably oriented in the wrong direction, estimating the wrong threat, unsupplied, unrested, in bad terrain, ill informed, physically unfit, morally unprepared, or technically dislocated. Forces in war remain unready for combat for virtually the entire duration of the conflict, attaining a degree of readiness for only the briefest of moments before lapsing into unreadiness again."

²⁸ Christopher Bellamy, The Future of Land Warfare, (St. Martin Press, New York, NY, 1987), 169.

²⁹ Ibid., 171.

³⁰ Ibid., 172.

³¹ Ibid., 190.

³² Ibid., 184.

³³ Jacob W. Kipp, Ph.D., "To Break Japan's Spine" and "Milepost" U.S. Soviet Negotiations over Soviet Entry into the Pacific War, October 1944-February 1945, (Foreign Military Studies Office, Fort Leavenworth, KS 2000), 30 (Draft).

³⁴ Richard B. Frank, Downfall: The End of the Imperial Japanese Empire, (New York: Random House, 1999), 31-32. "During Discussions in Moscow in October 1944, Stalin declared that the Soviet Union would enter the Pacific war three months after Germany's defeat, and he agreed to permit the establishment of American air-force bases in the Soviet Maritime Territories and Kamchatka, as well as a naval base at an indeterminate time. As the purchase for the grants, Stalin presented a huge tabulation of supply demands, which were met."

³⁵ Jacob W. Kipp, Ph.D., "To Break Japan's Spine" and "Milepost" U.S. Soviet Negotiations over Soviet Entry into the Pacific War, October 1944-February 1945, (Foreign Military Studies Office, Fort Leavenworth, KS 2000), 56 (Draft).

³⁶ Ibid., 1 (Draft).

³⁷ Sun Tzu, The Art of War, Translated by Ralph D. Sawyer, (Westview Press, 1994), 147-149.

³⁸ Ibid. "Orthodox' tactics include employing troops in the normal, conventional, 'by the book' expected ways, such as massive frontal assaults, while stressing order and deliberate movement." 'Unorthodox' tactics are primarily realized through employing forces, especially flexible ones, in imaginative, unconventional, unexpected ways."

³⁹ Ibid.

⁴⁰ Edward N. Luttwak, Strategy: The Logic of War and Peace, (The Belknap Press of Harvard University Press, Cambridge MA, 1987), 92-98.

⁴¹ Ibid., 92-93.

⁴² Ibid., 92.

⁴³ Ibid., 94.

⁴⁴ Ibid.

⁴⁵ Ibid., 93.

⁴⁶ Ibid., 94.

⁴⁷ Ibid.

⁴⁸ Ibid., 95.

⁴⁹ Walter LeFaber, America, Russia, and the Cold War, 1945-1971, (John Wiley and Sons, Inc. New York, 1972), 80.

⁵⁰ Russell F. Weigley, The American Way of War, (Indiana University Press, Bloomington, 1977), 411. "If nuclear massive retaliation could not in fact deter all types of Communist aggression, the United States might have to return to the plans of the later Truman administration for a strategy of deterrence to be implemented not alone by nuclear power but by a balanced variety of air, sea, and ground force, designed to deter aggression on any scale by means of readiness to make graduated responses proportionate to the scale of any enemy adventure."

⁵¹ Robert H. Scales, Firepower in Limited War, (Presidio Press, Novato, CA, 1995) 246.

⁵² Christopher Bellamy, The Future of Land Warfare, (St. Martin Press, New York, NY, 1987), 106-120.

⁵³ Michael R. Gordon and General Bernard E. Trainor, The General's War, (Little, Brown and Company, New York, 1995) 57. The authors state that during the Carter Administration there were a number of initiatives to support the U.S. Marines in terms of pre-positioning. Unfortunately, the Reagan administration placed logisticians second in the order of precedence. The result was a military well endowed with high-tech weaponry, but little capability to deploy and sustain. The author of this monograph feels that though the problems were felt by the commanders during the Gulf War, the problems were not insurmountable. Preparation, albeit limited was in fact suitable for large-scale contingencies.

⁵⁴ Larry H. Addington, The Patterns of War Since the Eighteenth Century, (Indiana University Press, Bloomington, 1984) 309-310.

⁵⁵ Sun Tzu, The Art of War, Translated by Ralph D. Sawyer, (Westview Press, 1994), 178.

⁵⁶ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 57.

⁵⁷ Ibid., 61.

⁵⁸ William S. Lind, Maneuver Warfare Handbook, (Westview Special Studies in Military Affairs, 1985), 4. Soviet Colonel F. D. Sverdlov in a recent study, "Tactical Maneuver," wrote. "Maneuver...is organized movement of troops (forces) during combat operations taking an advantageous position relative to the enemy in order to deliver a decisive strike." Colonel F. D. Sverdlov, "Tactical Maneuver," translated in Strategic Review (Summer, 1983), 88.

⁵⁹ Department of the Army, FM 101-5-1, Operational Terms and Graphics, (Washington, DC: United States Government Printing Office, 1997), 1-96.

⁶⁰ Martin Van Crevald, Air Power and Maneuver Warfare Theory, (Air University Press, Maxwell Air Force Base, AL, 1994), 1.

⁶¹ John Boyd, "Patterns of Conflict" (Unpublished slide presentation archived at the Marine Corps University Research Archives, Quantico, VA, 1986) Slide 5.

⁶² William S. Lind, Maneuver Warfare Handbook, (Westview Special Studies in Military Affairs, 1985), 6.

⁶³ Ibid., 13.

⁶⁴ Ibid., 7.

⁶⁵ Ibid., 18.

⁶⁶ Ibid., 8.

⁶⁷ Ibid., 18.

⁶⁸ Ibid.

⁶⁹ Ibid., 6.

⁷⁰ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 54.

⁷¹ Department of the Army, FM 100-5, Operations, (Washington, DC: United States Government Printing Office, 1993), 2-5.

⁷² Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 61.

⁷³ Ibid., 44.

⁷⁴ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 211.

⁷⁵ Department of the Army, FM 101-5-1, Operational Terms and Graphics, (Washington, DC: United States Government Printing Office, 1997), 1-24.

⁷⁶ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 47.

⁷⁷ Sun Tzu, The Art of War, Translated by Samuel b. Griffith, (London: Oxford University Press, 1963), 77.

⁷⁸ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 19-20.

⁷⁹ Chairman of the Joint Chiefs of Staff, Joint Vision 2010, (Washington, DC: The Joint Staff, May 1996), p 40.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Jeffrey McKittrick, James Blackwell, Fred Littlepage, George Kraus, Richard Blanchfield, Dale Hill, "The Revolution in Military Affairs," Battlefield of the Future 21st Century Warfare Issues, Air War College Studies in National Security No. 3, eds: Barry R. Schneider and Lawrence E. Grinter, (Air University Press, Maxwell Air Force Base, AL, September 1995), 84.

⁸³ Robert H. Scales Jr. MG, USA, Future Warfare, (U.S. Army War College, 1995), 10.

⁸⁴ Ibid., 114.

⁸⁵ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 18.

⁸⁶ Ibid., 18.

⁸⁷ Ibid., 58.

⁸⁸ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 58.

⁸⁹ Bruce I. Gudmunson, Maneuver Warfare-An Anthology, edited by Richard D. Hooker, (Presidio Press, CA, 1993) 288.

⁹⁰ Ibid.

⁹¹ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 144.

⁹² Aleksandr A. Svechin, Strategy, (East View Publications, MN, 1992), 196.

⁹³ John Boyd, "Patterns of Conflict" (Unpublished slide presentation archived at the Marine Corps University Research Archives, Quantico, VA, 1986) Slide 50.

⁹⁴ Ibid., 56.

⁹⁵ Ronald J. Hays, "Command and Control for Half the World," Control of Joint Forces a New Perspective, edited by Clarence E. McKnight, LTG USA Ret. (AFCEA International Press, Fairfax VA, 1989) 127.

⁹⁶ William S. Lind, Maneuver Warfare Handbook, (Westview Special Studies in Military Affairs, 1985), 29.

⁹⁷ Crevald, Martin van, Air Power and Maneuver Warfare, (Air University Press, Maxwell Air Force Base, AL, 1994), 225.

⁹⁸ Ibid., 18.

- ⁹⁹ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 156-7
- ¹⁰⁰ William S. Lind, Maneuver Warfare Handbook, (Westview Special Studies in Military Affairs, 1985), 19.
- ¹⁰¹ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 18.
- ¹⁰² William J. Clinton, President, USA, "A National Security Strategy for a New Century," (White House, October 1998), 1.
- ¹⁰³ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 152-153.
- ¹⁰⁴ William J. Clinton, President, USA, "A National Security Strategy for a New Century," (White House, October 1998), 3.
- ¹⁰⁵ Aleksandr A. Svechin, Strategy, (East View Publications, MN, 1992), 169.
- ¹⁰⁶ Robert H. Scales Jr. MG, USA, Future Warfare, (U.S. Army War College, 1995), 28.
- ¹⁰⁷ Ibid., 147-148.
- ¹⁰⁸ Ibid.
- ¹⁰⁹ Robert H. Scales Jr. MG, USA, Future Warfare, (U.S. Army War College, 1995), 146.
- ¹¹⁰ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 277.
- ¹¹¹ John F. Antal, "Thoughts About Maneuver Warfare," Maneuver Warfare an Anthology, Edited by: Richard D. Hooker, Jr., (Presidio Press, Novato, CA, 1993) 63.
- ¹¹² Robert A Pape, Bombing to Win, (Cornell University Press, London, 1996), 323.
- ¹¹³ Martin Van Crevald, Air Power and Maneuver Warfare, (Air University Press, Maxwell Air Force Base, AL, 1994), 223.
- ¹¹⁴ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 278. Leonhard writes that the failure to declare war on Iraq blurred the objectives in Kuwait. The absence of the clear-cut objectives is a symptom of limited war. Had clear-cut objectives been issued, the potential of dislocating the Iraqi forces located in Kuwait could have been completed with operational maneuver.
- ¹¹⁵ John A Warden, III, The War Campaign: Planning for Combat, (National Defense University Press, Washington, DC., 1988), 123.
- ¹¹⁶ Martin Van Crevald, Air Power and Maneuver Warfare, (Air University Press, Maxwell Air Force Base, AL, 1994), 224.

¹¹⁷ Sun Tzu, The Art of War. Translated by Ralph D. Sawyer, (Westview Press, 1994), 177.

¹¹⁸ Robert R. Leonhard, The Art of Maneuver, (Presidio Press, CA, 1991), 73.

¹¹⁸ Robert R. Leonhard, The Principles of War for the Information Age, (Presidio Press, CA, 1998), 157.

Bibliography

BOOKS

Addington, Larry H. The Patterns of War Since the Eighteenth Century. Bloomington IN: Indiana University Press, 1984.

Allard, Kenneth. Command, Control, and the Common Defense. Washington, D.C.: National Defense University, 1996.

Alexander, Bevin. The Future of Warfare. New York: W.W. Norton & Company, 1995.

Androle, Stephen J. and Jon L. Boyes, eds. Principles of Command and Control. Washington, D.C.: AFCEA International Press, 1987.

Bellemy, Christopher. The Future of Land Warfare. New York: St. Martin Press, 1987.

Beniger, James R. The Control Revolution. Massachusetts: Harvard University Press, 1986.

Bouchard, Joseph F. Command in Crisis. New York: Columbia University Press, 1991.

Clausewitz, Carl Von. On War. eds. and trans. Michael Howard and Peter Peret, Princeton: Princeton University Press, 1989.

Cohen, Eliot A. and John Gooch. Military Misfortunes: The Anatomy of Failure in War.

- New York: A Division of Macmillan, Inc. 1990.
- Cooper, Mathew. The German Army 1933-1945. Michigan: Scarborough House Publishers, 1978.
- Crevald, Martin Van. Command in War. Cambridge, MA and London, England: Harvard University Press, 1985.
- Dorner, Dietrich. The Logic of Failure. New York: Metropolitan Books, 1989.
- Earle, Edward Mead, ed. Makers of Modern Strategy. Princeton University Press, 1943.
- Frank, Richard B. Downfall: The End of the Imperial Japanese Empire. New York: Random House, 1999.
- Hart, B.H. Liddell. Strategy. England: Gaber and Fager, Ltd., London, 1967.
- Heller, Charles E. and William A. Stofft, eds. America's First Battle: 1776-1965. Kansas: University Press of Kansas, 1986.
- Hooker, Richard D. Maneuver Warfare: An Anthology. California: Presidio Press, 1993.
- Kennedy, Paul. Grand Strategy in War and Peace. New Haven and London: Yale University Press, 1991.
- Klein, Gary. Sources of Power: How People Make Decisions. Massachusetts: The MIT Press, 1999.
- LeFaber, Walter. America, Russia, and the Cold War 1945-1971. New York: John Wiley and Sons, Inc., 1972.
- Leonhard, Robert R. The Art of Maneuver. California: Presidio Press, 1991.
- Leonhard, Robert R. The Principles of War in the Information Age. California: Presidio Press, 1998.
- Leonhard, Robert R. Fighting by Minutes-Time and the Art of War. Westport CT: Preagor Publishers, 1994.
- Lind, William S. Maneuver Warfare Handbook. Boulder and London: Westview Press, 1985.
- Luttwak, Edward N. Strategy: The Logic of War and Peace. Cambridge MA: The Belknap Press of Harvard University Press, 1987.

- Marshall, S.L.A. Men Against Fire. Massachusetts: Peter Smith, 1947.
- McKnight, Clarence E. (LTGen.) and Senator Sam Nunn, eds. Control of Joint Forces: A New Perspective. Virginia: AFCEA International Press, 1989.
- Mintzberg, Henry. The Rise and Fall of Strategic Planning. New York: The Free Press, 1994.
- Naveh, Shimon. In Pursuit of Military Excellence: The Evolution of Operational Theory. London: Frank Cass Publishers, 1997.
- Palmer, Dave R. Col. Summons of the Trumpet. New York: Ballantine Books, 1984.
- Pape, Robert A. Bombing to Win. London: Cornell University Press, 1996.
- Paret, Peter, ed. Makers of Modern Strategy. New Jersey: Princeton Press, 1986.
- Piattelli-Palmarini, Massimo. Inevitable Illusions: How Mistakes of Reason Rule Our Minds. New York: John Wiley & Sons, Inc., 1994.
- Scales, Robert H. Jr. MG, USA. Firepower in Limited War. Novato, CA: Presidio Press, 1995.
- Scales, Robert H. Jr. MG, USA. Future Warfare. U.S. Army War College, 1995.
- Sun Tzu. The Art of War. Translated by Samuel B. Griffith. London: Oxford University Press, 1963.
- Sun Tzu. The Art of War. trans. Ralph D. Sawyer, Boulder: Westview Press, 1994.
- Svechin, Aleksandr A. Strategy. (Minnesota: N East View Publications, 1992.
- Toffler, Alvin and Heidi. War and Anti-War: Survival at the Dawn of the 21st Century. Boston: Little, Brown and Company, 1993.
- Gordon, Michael R. and General Bernard E. Trainor, USMC. The General's War. New York: Little, Brown and Company, 1995.
- Weigley, Russell. The American Way of War. Bloomington, IN: Indiana University press, 1973.

REPORTS and MONOGRAPHS

- Agoglia, John F. "Leader Development: Leveraging Combat Power Through

- Leadership." Fort Leavenworth, KS: Command and General Staff College, 1993.
- Anastas, Kevin P. "Information Overload: Tactical Information Processing in Divisions and Corps." Fort Leavenworth, KS: Command and General Staff College, 1991.
- Bass, Charles A. Jr. "Decision Loops: The Cybernetic Dimension of Battle Command." Fort Leavenworth, KS: Command and General Staff College, 1996.
- Durham, Richard W. "Operational Art in the Conduct of Naval Operations." Fort Leavenworth, KS: Command and General Staff College, 1997.
- Flynn, Michael J. "A Common Understanding of Conflict: The Doctrinal Relationship of FM 100-5 (Coordinating Draft) and Joint Doctrine." Fort Leavenworth, KS: Command and General Staff College, 1996.
- Hall, Russell. "Defining Joint Vision 2010's Dominant Maneuver." Fort Leavenworth, KS: Command and General Staff College, 1997.
- Johnson, Robert C. "Joint Campaign Design: Using a Decide-Detect-Attack (DDA) Methodology to Synchronize the Joint Force's Capabilities Against Enemy Centers of Gravity." Fort Leavenworth, KS: Command and General Staff College, 1993.
- Rowlett, Rickey M. "The U.S. Army and Ground Combat Theory." Fort Leavenworth, KS: Command and General Staff College, 1990.
- Swain, Richard M. Ph.D. "Filling the Void: The Operational Art and the U.S. Army." Fort Leavenworth, KS: Command and General Staff College, 1989.
- Tucker, Craig A. "False Prophets: The Myth of Maneuver Warfare and the Inadequacies of FMFM-1 Warfighting." Fort Leavenworth, KS: Command and General Staff College, 1994.
- Wiersema, Richard. "The Future of War: Is Operational Art Now Impossible?" Fort Leavenworth, KS: Command and General Staff College, 1997.
- Wood, Todd R. "Can Operational Art Occur in Military Operations Other Than War?" Fort Leavenworth, KS: Command and General Staff College, 1997.
- Wunderle, William D. "Yin and Yang: The Relationship of Joint Vision 2010's Concepts of Dominant Maneuver and Precision Engagement." Fort Leavenworth,

KS: Command and General Staff College, 1998.

GOVERNMENT PUBLICATIONS

Chairman of the Joint Chiefs of Staff. Joint Vision 2010. Washington, DC: The Joint Staff, May 1996.

Clinton, William J., President, USA. A National Security Strategy for a New Century. White House, October 1998.

Combat Studies Institute Faculty. Studies in Battle Command. Fort Leavenworth, KS: Command and General Staff College, 1996.

Crevald, Martin Van. Air Power and Maneuver Warfare Theory. Maxwell Air Force Base, AL: Air University Press 1994.

Holder, Leonhard., LTG, Ret. Situational Awareness in Infantry Battalions. U.S. Army Research Institute, 1998,
<http://www.ari.army.mil/situationawareness/chap8.htm>.

Kipp, Jacob W., Ph.D. "To Break Japan's Spine" and "Milepost" U.S. Soviet Negotiations over Soviet Entry into the Pacific War, October 1944-February 1945. Fort Leavenworth, KS: Foreign Military Studies Office, 2000, (Draft).

Klein & Associates. A Decision-Centered Study of the Regimental Command Post. Fairborn, Ohio, 1996.

McKittrick, Jeffrey and James Blackwell, Fred Littlepage, George Kraus, Richard Blanchfield, Dale Hill, "The Revolution in Military Affairs," Battlefield of the Future 21st Century Warfare Issues, Air War College Studies in National Security No. 3, eds. Barry R. Schneider and Lawrence E. Grinter. Maxwell Air Force Base, AL: Air University Press, September 1995.

Shambach, Stephen A. Strategic Leadership Workshop: Strategic Decision-Making in the Information Age. Army War College, 1996, <<http://carlisle-www.army.mil/usawc/dclm/wrkshop/rptprocd.htm>>.

Training and Doctrine Command. Annual Report on the Army After Next (AAN) Project. Fort Monroe, VA: Training and Doctrine Command, 1998.

Training and Doctrine Command Pamphlet 525-5. Force XXI Operations. Fort Monroe, VA: Training and Doctrine Command, 1994.

- Training and Doctrine Command. Force XXI: Land Combat in the 21st Century. Fort Monroe, VA: Training and Doctrine Command, 1996.
- U.S. Army. Field Manual 100-34, Command and Control. Washington, D.C.: Department of the Army, 1999.
- U.S. Army. Field Manual 100-5, Operations. Washington, D.C.: Department of the Army, 1993.
- U.S. Army. Field Manual 101-5-1, Operational Terms and Graphics. Washington, D.C.: Department of the Army, 1997.
- United States Marine Corps. FMFM-1, Warfighting. Washington D.C.: Department of the Navy, 1989.
- United States Marine Corps. MCDP-1, Warfighting. Washington D.C.: Department of the Navy, 1997.
- Warden, John A., III. The War Campaign: Planning for Combat. Washington, DC: National Defense University Press, 1988.

ARTICLES

- Antal, John F. "It's Not the Speed of the Computer That Counts! The Case for Rapid Battlefield Decision-Making." Armor, May-June 1998, 12-15.
- Antal, John. F. "Thoughts About Maneuver Warfare." in Maneuver Warfare Anthology, ed. Richard D. Hooker, Jr. CA: Presidio Press, 1993.
- Bateman, Robert L. "Avoiding Information Overload." Military Review, Jul-Aug 1998, <<http://www-cgsc.army.mil/milrev/English/JulAug98/bateman.htm>>
- Bolger, Daniel P. "Maneuver Warfare Reconsidered," in Maneuver Warfare Anthology. ed. Richard D. Hooker, Jr. CA: Presidio Press, 1993.
- Boyd, John. "Destruction and Creation." Unpublished 16-page essay archived at the Marine Corps University Research Archives, Quantico, VA, 1976.
- Boyd, John. "Discourses on Winning and Loosing." Unpublished briefing slides archived at the Marine Corps University Research Archives, Quantico, VA, 1986.

- Boyd, John. "Organic Design for Command and Control." in "Discourses on Winning and Losing," Unpublished slide presentation archived at the Marine Corps University Research Archives, Quantico, VA, 1986.
- Craig, Gordan A. "Delbruck: The Military Historian." In Makers of Modern Strategy. ed. Edward Mead Earle. New Jersey: Princeton University Press, 1943.
- Cutter, W. Bowman. Spero, Joan. D'Andrea Tyson, Laura. "New World, New Deal." Foreign Affairs, March-April 2000, 80.
- Fadok, David S., LTC, "John Boyd and John Warden: Airpower's Quest for Strategic Paralysis." in The Paths of Heaven: The Evolution of Airpower Theory. Maxwell AFB: Air University Press, 1997.
- Gudmundsson, Bruce I. "Maneuver Warfare: The German Tradition." in Maneuver Warfare Anthology ed. Richard D. Hooker, Jr. CA: Presidio Press, 1993.
- Hays, Ronald J. "Command and Control for Half the World," in Control of Joint Forces a New Perspective, ed. Clarence E. McKnight, LTG USA Ret. Fairfax, VA: AFCEA International Press, 1989.
- Klein, Gary (Ph.D.) and MAJ John Schmitt. "Fighting in the Fog: Dealing with Battlefield Uncertainty." Marine Corps Gazette, August, 1996, 64-65.
- Kojac, Jeffrey S. "Beyond C2: Dangers and Opportunities." Marine Corps Gazette, Oct 1998, 37-39.
- Leonhard, Robert R. "Maneuver Warfare and the United States Army." in Maneuver Warfare Anthology, ed. Richard D. Hooker, Jr. CA: Presidio Press, 1993.
- Lind, William S. "The Case for Maneuver Warfare." in The Defense Reform Debate, eds. Asa A. Clark IV/Peter W. Chiarelli/Jeffrey S. McKittrick/James W. Reed, Baltimore: The Johns Hopkins University Press, 1984.
- Lind, William S. "The Theory and Practice of Maneuver Warfare." in Maneuver Warfare Anthology, ed. Richard D. Hooker, Jr. CA: Presidio Press, 1993.
- Morton, Oliver. "The Information Advantage." The Economist, June 1995, 5-20.
- Schmitt, John F. "How We Decide." Marine Corps Gazette, Oct 1995, 16-20.
- Spinney, Frank. "Genghis John." Proceedings, July 1997, 42-47.

Wass de Czege, Huba, BG., USA, Ret. "Army Doctrinal Reform." in The Defense Reform Debate, eds. Asa A. Clark IV/Peter W. Chiarelli/Jeffrey S. Mckitrick/James W. Reed, Baltimore: The Johns Hopkins University Press, 1984, 102-103.